newline

Naos + (IP+ Series)

Interactive Touch Screen

User Manual Extended

Please properly keep the manual for further reference.

Contents

Welcome:

Thanks for purchasing this product. Please read the instructions carefully before using this 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.

NOTE 1: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NOTE 2: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The symbol of the crossed out wheeled bin indicates this product should not be placed in municipal waste. Instead, dispose of waste equipment by handing it over to a designated collection point for the recycling of electrical and electronic equipment.

Symbol Conventions

Symbols are used in this document to indicate operations that need particular attention. The symbols are defined as follows:

📖 NOTE	Provides additional information to supplement operation in the main text.
⚠ CAUTION	Indicates a potentially hazardous situation that, if not avoided, could result in equipment damage, data loss, performance deterioration, or unanticipated results.
⚠ WARNING	Indicates a hazard with risk that, if not avoided, could result in death or injury.

Safety Instruction

For your safety, please read the following instruction before you use the product. Serious injury or property damage may be caused by improper operations. Do not try to repair the product on your own.

⚠ WARNING	
	Disconnect the product from the power supply immediately if major failures occur. Major failures include the following: • If smoke, a peculiar smell or an abnormal sound is discharged from the product. • No image or sound is displayed, or the image error occurs. In the preceding scenarios, do not continue to use the product. Disconnect power supply immediately and contact professional staff for troubleshooting.
	Do not drop any liquids, metal or anything combustible onto the product. • If any liquid or metal are dropped onto or into the product, power off the product and disconnect the power supply, then contact professional staff for solutions. • Pay attention to children when they are close to the product.
	Put the product on a stable surface. An unstable surface includes, and is not limited to an inclined plane, a shaky stand, desk or platform, that might cause the product to turnover and be damaged.
	Do not open the panel or change the panel on your own. High voltage components are installed in the product. When you open the panel, high voltage, electric shock, or other dangerous situations may occur. If inspection, adjustment, or maintenance is required, contact the local distributor for help.
	Use the provided power supply. • To prevent the product from being damaged, do not use any types of power cables other than the one provided with the product. • Use a three-wire socket and ensure that it is properly grounded. • Pull out the power plug from the socket if the product is not used for a long period.
	Clean the power plug regularly. • Fire or electric shock may be caused if the product is powered on, while you are cleaning. • Pull out the power plug before cleaning it with a dried cloth.
	Power output port is 5V/2A The voltage/current of the rear power output port is 5 V/2 A (maximum). Purchase the power code/AC adapter according to customer needs. Please do not connect any products with different power requirement. Otherwise, it may cause product damage or fire.

⚠ WARNING

🚫	**Do not put items on the top of the product.** • Do not put items, such as a container for liquid (a vase, flowerpot, cosmetics or liquid medicine) on the top of the product. • If any water or liquid is spilled on the product, the product may short circuit cause fire or electric shock. • Do not walk on or hang any items on the product.
🚫	**Do not install the product in an improper place.** • Do not install the product in humid places, such as the bathroom, the shower room, near windows, or outdoor environments that experience rain, snow or other harsh weather. Avoid installation near hot spring vapor. The preceding environments may cause faults in the product or electric shock under extreme conditions. • Do not put an exposed fire source, such as a lit candle on the product.
⚠	**Pull out the power supply during thunderstorms.** • Do not touch the product during a lighting storm, you may experience an electric shock. • Install or place components that supply high enough voltage to cause personal injury out of the reach of children.
🚫	Do not touch the power cable with wet hands.

⚠ CAUTION

⚠	**Do not install the product in high temperature environments.** • Do not install the product near a heat source, such as a radiator, a heat reservoir, a stove or other heating products. • Do not expose the product to direct sunlight, which may cause high temperatures and subsequent faults in the product.
❗	**When transporting the product:** • Pack the product for transport or maintenance by using the cartons and cushioning material provided with the product. • Move the product vertically during transport. The screen or other components are easily broken if the product is moved in an improper way. • Before you move the product, disconnect all external connections and separate all topple preventing products. Move the product carefully to prevent it from being hit or squeezed, especially the screen, which may cause injury if broken.
⚠	**Do not cover or block up any vents on the product.** • Any overheated components may cause fire, damage the product, and shorten the service life. • Do not lay the product down in a way where the venting surface will be covered.

	⚠ **CAUTION**
	• Do not install the product on carpet or cloth. • Do not use a cloth such as table cloth to cover the product.
🚫	**Keep the product away from the radio.** The product complies with the international EMI standard to prevent radio interference. However, interference may still exists and causes noise in the radio. If noise occurs in the radio, try the following solutions. • Adjust the direction of the radio antenna to avoid the interference from the product. • Keep the radio away from the product.
	If the screen glass is broken or falls off. • Keep all personnel 10 feet away from the screen to ensure safety. • Do not perform any installation or disassembly while the screen glass is broken or has fallen off.
	Use the battery correctly. • Galvanic corrosion, electric leakage, and even fire may be caused by improper battery usage. • It is recommended to use the designated type of battery and install the battery by the correct electrodes (positive and negative). • Do not install and use a new battery with a used one. • Take out the battery if the remote control is not used for a long period. • Do not expose the battery to overheated environments, such as sunlight and or heat sources. • Dispose of the used battery based on your local regulations. • Please use the specified type to replace the battery on the main board, rise of fire or explosion if the battery is replaced by an incorrect type.
	Do not damage the power cable. • Do not damage, change, twist, bend, or forcibly drag the power cable. • Do not put weights (such as the product itself) on the power cable. • Do not forcibly drag the cable when you pull out the power plug. If the power cable is damaged, please contact the local distributor to repair or replace it. • The power cable in the accessory box is for this product only. Do not use it on other products.
	Additional advice: • Use the product in an environment with comfortable lighting. It is harmful to your eyes to watch in a too bright or too dark environment. • Relax your eyes watching for a period of time. • Keep sufficient distance from the product to protect your eyes and prevent eyestrain. • Adjust the volume to an appropriate level, especially at night. • Use amplifier equipment as the audio input source with caution. If you must use amplifier equipment, the input power should not exceed the maximum of speaker power. Otherwise, the speaker can become overpowered and damaged.

⚠️ **CAUTION**	
	About USB port. USB 3.0 ports switch connections based on signal sources. If the current signal source is reading the data from an external product connecting to the port, please switch the signal source after the data reading is complete. Otherwise, the data or product may be damaged.

1 Parts and Functions

Thank you for choosing interactive touch screen. As our latest independently developed and produced human-machine interactive products, Under no signal, if there is no operation, the interactive touch screen will automatically shut down. The interactive touch screen are multi-functional teaching displays for interactive teaching, digital demonstration, multi-media presentation and touch operations. They are well designed and produced to meet needs of education applications, and provide a user-friendly experience, digital intelligent control as ideal apparatus for modern education.
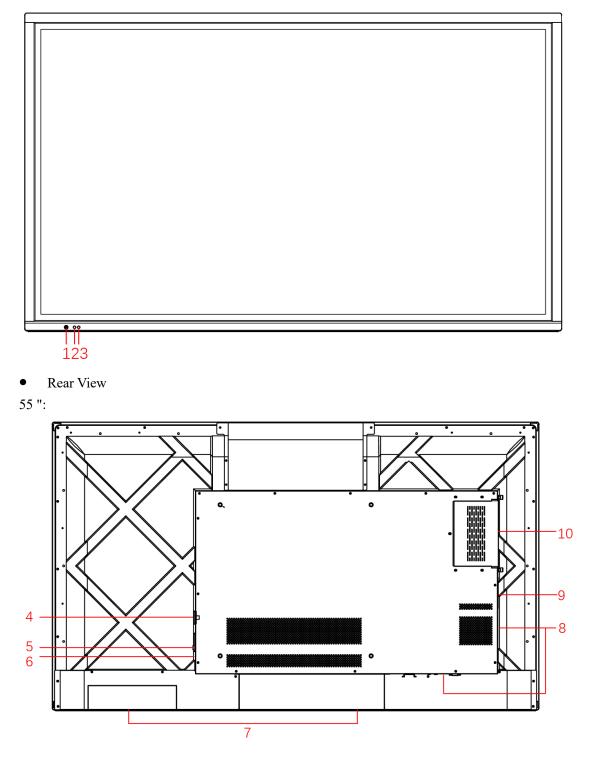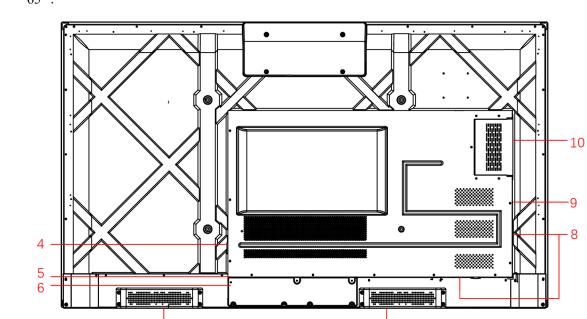
Features:

- Specially designed for teaching systems.
- Adopt advanced infrared array scanning and sensing technology, HID driver-free, meaning the product is activated soon after it is powered on.
- Multi-signal sources can be switched by touching the screen.
- A special button is set to adjust the brightness with no impact on watching and save up to 50% energy.
- Support high-power amplifiers.
- When the screen display function is disabled, the product can still play audio to save energy.
- High brightness and contrast display to ensure clear display under straight light or in outdoor environment.
- If there is no signal and no operation is performed, the interactive touch screen will automatically shut down.
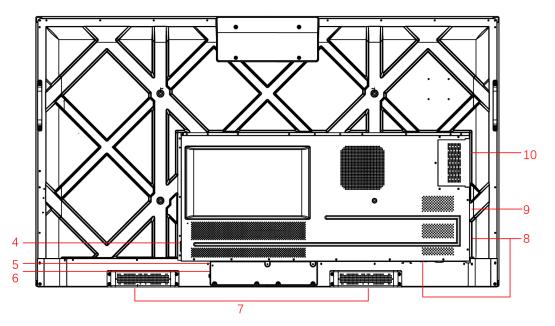
1.1 Parts

- Front View

55 "/65 "/75 "/86 ":

123

- Rear View

55 ":

65 ":

75 "/86 ":

1	Power On/Off	6	Power Switch
2	Remote Control Receiver	7	Speakers
3	Light Sensor	8	Rear Ports
4	Power Output Plug	9	SDM-S Slot
5	Power Supply Plug	10	OPS Port

Notes:

The product images shown are for illustration purposes only and may not be an exact representation of the product.

1.2 Front Buttons

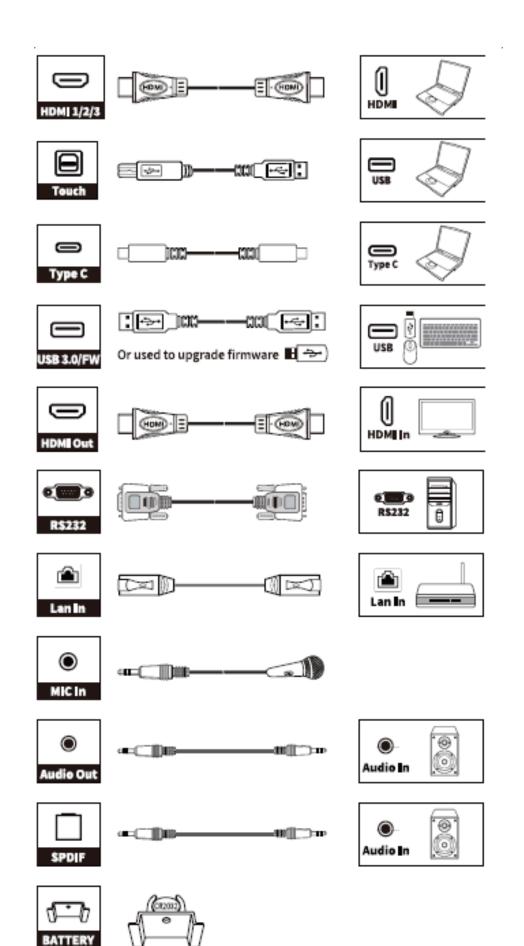| Buttons	Operations	Functions
⏻	Short press	Power on • Solid green color : Panel is on and working
		Power off • Solid red color : Panel is in shut down mode

1.3 Ports

⚠ **CAUTION**

- *Rear USB 3.0 ports switch connections based on signal sources. If the current signal source is reading the data from an external product connecting to the port, please switch the signal source after the data reading is complete. Otherwise, the data or product may be damaged.*
- *For USB use, USB 2.0 provides up to 500mA whereas USB 3.0 provides up to 900mA of power. Please make sure the USB flash drive is formatted to FAT32 before inserting into the panel.*

⚠ **WARNING**

- *The rear power output port supplies 5 V/2 A (maximum) power. Please contact Newline to purchase the power AC adapter for powering external devices. Please do not connect any products which require power than listed. Doing so may cause injury or damage to the panel.*
- *For HDMI 2.x high speed signal transmission, please use only the shipped cable or use HDMI 2.x certified shielded cable to avoid noise interference.*

HDMI 1/2/3	HDMI cable	**HDMI** (laptop)
Touch	USB cable	**USB** (laptop)
Type C	Type C cable	**Type C** (laptop)
USB 3.0/FW	USB cable — Or used to upgrade firmware	**USB** (USB drive, keyboard, mouse)
HDMI Out	HDMI cable	**HDMI In** (monitor)
RS232	RS232 cable	**RS232** (computer)
Lan In	Lan cable	**Lan In** (router)
MIC In	Microphone cable	
Audio Out	Audio cable	**Audio In** (speaker)
SPDIF	Audio cable	**Audio In** (speaker)
BATTERY	Battery	

1.4 Remote Control

⚠️ **CAUTION**

Carefully read the following instructions before using the remote control to avoid possible faults:
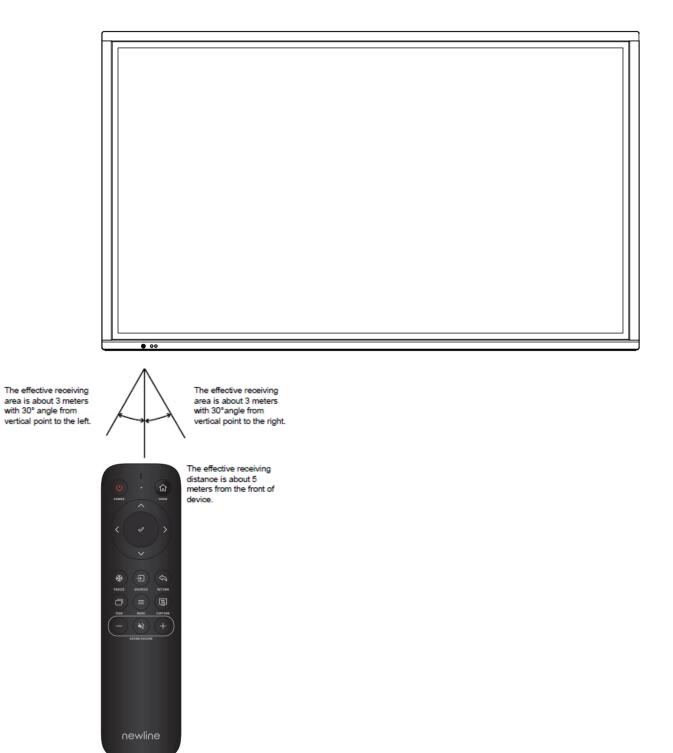
● Do not drop or damage the remote control.

● Do not spill water or other liquids on the remote control.

● Do not place the remote control on a wet object.

● Do not place the remote control directly under sunlight or near a heat source.

Buttons	Operations
⏻	Power On/Off
⌂	Go to the Home Page
◄✛►	Directional Pad
✓	Confirm/OK
❄	Reserved button
⊣	Open the Status Page
↰	Return to Previous/Exit
❐	Reserved button
☰	Open the Settings Page
▣	Reserved button
—	Press once to decrease the volume, long press to decrease the volume continuously
🔇	Mute/Unmute Audio
＋	Press once to increase the volume, long press to increase the volume continuously

Remote control Instructions

The usage scope of the remote control includes the vertical distance within five meters in front of the product, and the area within an angle of 30 degrees from the vertical point to the left and the right.

The effective receiving area is about 3 meters with 30° angle from vertical point to the left.

The effective receiving area is about 3 meters with 30°angle from vertical point to the right.

The effective receiving distance is about 5 meters from the front of device.

POWER   HOME

FREEZE   SOURCES   RETURN

TASK   MENU   CAPTURE

SOUND VOLUME

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2 Installation Guide

2.1 Safety Precautions

Installation Environment

Avoid Electric Shock	Avoid Strong Magnetic Field	Keep Temperature Below 120°F(≤50°C)	Keep Relative Humidity Under 70%
Keep Away From Combustible Vapors (gas leaks,etc.)	Avoid Any Corrosive Liquids	Do Not Use Outdoors	Do Not Install Tilted

Installation Direction

| Hang the Product Horizontally | No Vertical Installation | Do Not Install Tilted | Do Not Lay Flat |

2.2 Installation Precautions

Weight Loading

Weight of the panel: 130lb/ 59kg (86INCH), 108lb/ 49kg (75INCH), 78.3lb/ 35.5kg (65INCH), 61.7lb/ 28kg (55INCH)
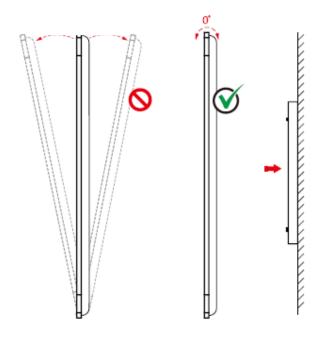
- When using a mobile stand, ensure that the weight of the panel is less than the loading capacity of the mobile stand.
- When using the wall-mount bracket, ensure that the wall can support the weight of the panel. We recommend that the wall surface be reinforced and have a loading capacity 4 times of the weight of the panel. Consult a professional installer for wall-mount installation.

📖 **NOTE**

The company does not undertake relevant legal responsibility for any problems caused by improper operation, if the third party mobile stand, or wall-mount bracket is beyond the scope of the panel.

- Do not install the panel where it might be hit by an opening or closing door.

Vertical installation
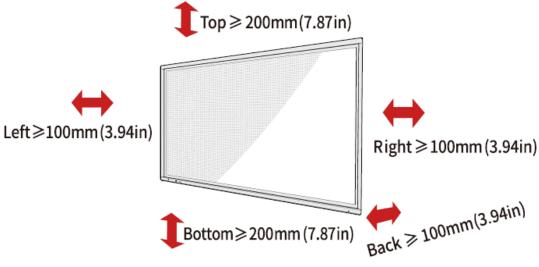
When installing the panel, try to keep the panel vertical. An excessive tilt angle may cause damage to the glass or other internal components.

NOTE

For any problem, please contact our support desk. Our company is not responsible for any damage or losses incurred by users if the users fails to follow the instructions.

Ventilation

Ensure adequate ventilation and/or an air conditioned environment. We recommend keeping certain distances from the side of the panel to the wall or panels. Ventilation requirements are shown in following figure.
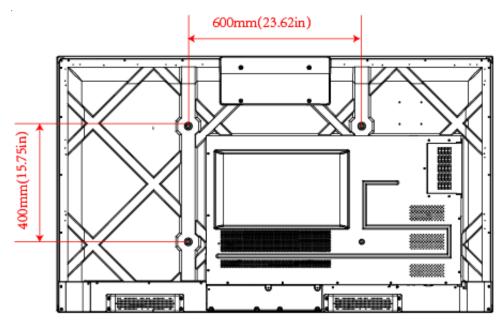

Top ≥ 200mm (7.87 in)
Left ≥ 100mm (3.94 in)
Right ≥ 100mm (3.94 in)
Bottom ≥ 200mm (7.87 in)
Back ≥ 100mm (3.94 in)
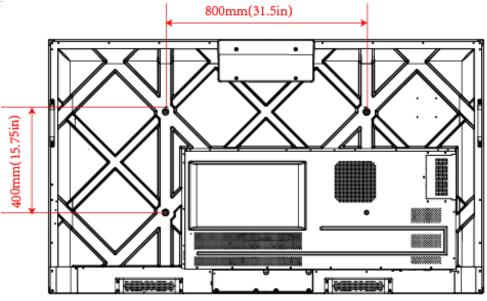
2.3 Installation

The dimensions of the four bracket mounting holes on the back panel are VESA MIS-F compliant (86INCH or 75INCH: 800 x 400 mm/31.50 x 15.75 in; 65INCH: 600 x 400 mm/23.62 x 15.75 in; 55INCH: 400 x 400 mm/15.75 x 15.75 in). Use metric M8 screws with a length of 10 mm to 15 mm (0.40 to 0.59 in) to secure the touch screen to the mounting system. Dimensions of the mounting holes on the back panel are shown on the following figure.

📖 **NOTE**
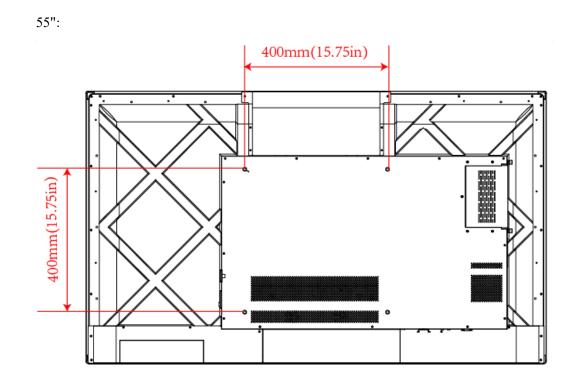
Consult a professional installer to install the panel.
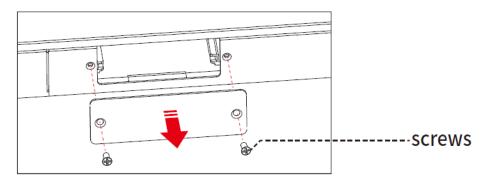
75"/86":

65":
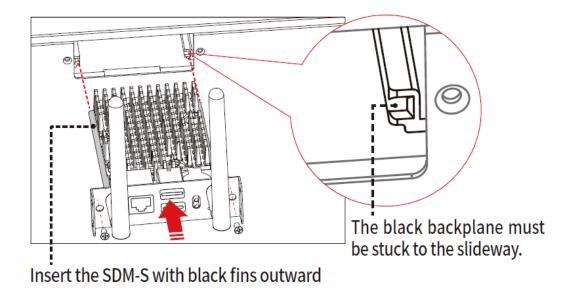
55":
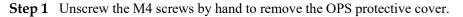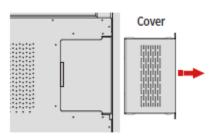
2.4 Installing the OPS (Optional)

⚠ **CAUTION**
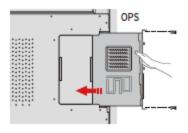
The OPS does not support hot plugging. Therefore, you must insert or remove the OPS when the panel is powered off. Otherwise, the panel or OPS may be damaged.

Only one of the SDM port or OPS port can be selected for use at the same time.

You will need to purchase the OPS separately. Perform the following steps to install the OPS.

Step 1 Unscrew the M4 screws by hand to remove the OPS protective cover.

**Step 2** Push the OPS into the port on the left side of the panel until firmly seated, using the M4 screws to secure the OPS.

2.5 Installing the SDM(Optional)

⚠️ **CAUTION**

The SDM-S does not support hot plugging. Therefore, you must insert or remove the SDM-S when the panel is powered off. Otherwise, the panel or SDM-S may be damaged.

Only one of the SDM port or OPS port can be selected for use at the same time.

Currently we don't provide SDM-S, but if you have a SDM-S to use, please install refering to the following steps.

Step 1 Unscrew the 2 screws on the SDM-S slot and remove the shielding cover.

Step 2 Insert the SDM-S into the port on the left side of the panel until firmly seated, using the 2 screws to secure it.

The black backplane must be stuck to the slideway.

Insert the SDM-S with black fins outward
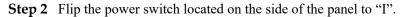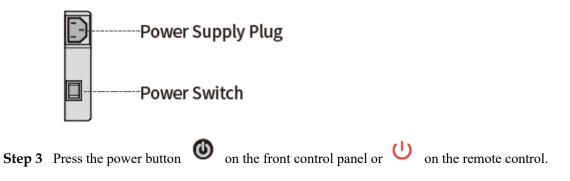
3 Power On/Off

3.1 Power On

Step 1 Ensure the power cable is fully seated into the panel and wall outlet before powering on the panel. Please confirm your wall outlet supports a power range of 100V to 240V with frequency at 50 Hz/60 Hz ± 5% and is fully grounded.

> 📖 **NOTE**
> *The power outlet should be installed near the equipment and should be easily accessible.*

Step 2 Flip the power switch located on the side of the panel to "I".

Step 3 Press the power button ⏻ on the front control panel or ⏻ on the remote control.

3.2 Power Off

Step 1 Press the power button ⏻ on the front panel or the power button ⏻ on the remote control to turn off the panel, the power indicator will turn to red.

Step 2 If you want to completely turn off the panel, turn off the rocker switch behind the panel (next to the power socket) and unplug the power cord.

- If an OPS is installed, the OPS and the screen will simultaneously powered off when the power is shutoff.

- Please properly shut down the panel before disconnecting the power source or it may cause damage. Accidental power failure may cause damage to the panel.

- Do not repeatedly turn the power on & off in a short period of time as it may cause malfunction.

3.3 Calibration

If the cursor position has a big deviation from the actual touch point, calibration is used to eliminate the deviation. Positioning is required in the following scenarios:
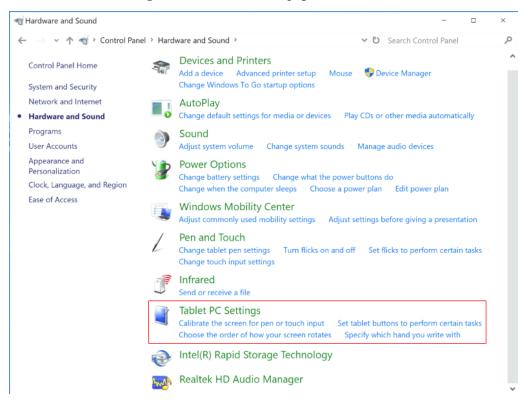
- The internal PC is used.

- A computer is connected through the HDMI and VGA interface.

📖 **NOTE**

Interface operation on the Smart system does not need positioning. External products with Microsoft Windows 7 or later versions will require positioning.

If the positioning is not correct, perform the following operations to calibrate again. The following takes Windows 10 as an example:
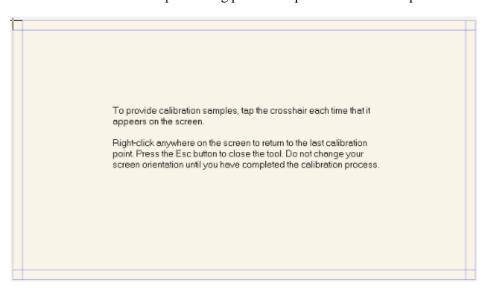
Step 1 Ensure that the HDMI or VGA interface and external products are connected properly.

Step 2 Select the corresponding Windows signal from the signal source menu. The Windows page will be displayed.

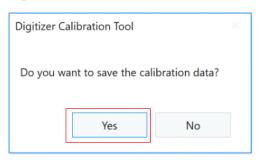**Step 3** Select **Tablet PC Settings** on the **Control Panel** page.

Step 4 Select in the Tablet PC Settings window.

Step 5 Select **Touch input** from the option and start calibration.

Step 6 Use finger or pencil to click and hold the center of the flickering cross ┼. Do not release it until ┼ moves to the next positioning point. Complete the calibration process as instructed.

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Step 7 After the calibration is complete, the **Digitizer Calibration Tool** dialog box will be displayed. Click **Yes** to save calibration data.

Digitizer Calibration Tool   ×

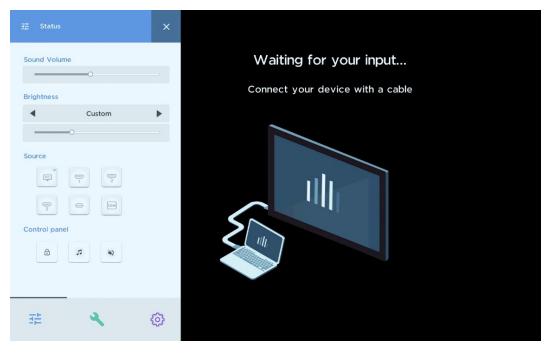Do you want to save the calibration data?

        Yes   No

🔑 **TIP**

- To ensure writing accuracy, use the pencil or stylus included with the product for proper positioning.
- Positioning errors may cause failure of touch functions of the display. In that case, please perform positioning again.

Step 8 The **Tablet PC Settings** dialog box will be displayed again. Click **OK**. The positioning will be complete.

4 Status

After the interactive touch screen is powered on, press ⊟ on the remote control to enter **Status** interface. The menu items include **Sound volume**, **Brightness, Source** and **Control panel**.

Use your finger to tap the screen or press ◄/►/▲/▼ on the remote control to select a menu item, press **OK** to complete the menu switching and option setting. Tap × to exit the setting.

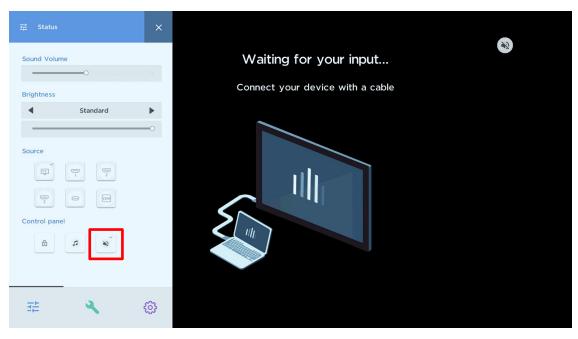**Sound volume**: Drag the slider to adjust the sound volume.

Brightness: Tap ◄/► to select the brightness mode(Standard > Auto > Custom > ECO), Only in custom mode, you can drag the slider to adjust the brightness respectively.

Source: Tap the icon to select PC, HDMI1, HDMI2, HDMI3, Type-C and SDM external signal source, the icon will light up when the external device connected successful.

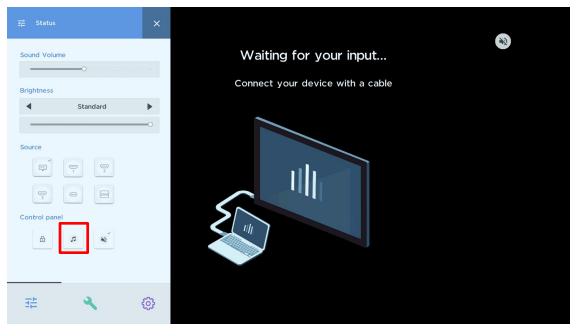**Control panel:** Tap the icon to access the screen lock, sound only and mute mode.

- **Panel Mute**

Tap 🔇 to mute the device. After the mute setting, a mute icon will appear in the upper right corner of the screen.

- **Sound Only Function**

Tap ♫ to enter the Sound Only, the screen turns black. Tap anywhere on the screen to exit the Sound Only (bright screen).

- **Screen Lock**

Tap 🔒 to set passkey to lock screen, passkey can be set to 4 digits. After Screen lock is enabled, unlock button will appear in the interface.
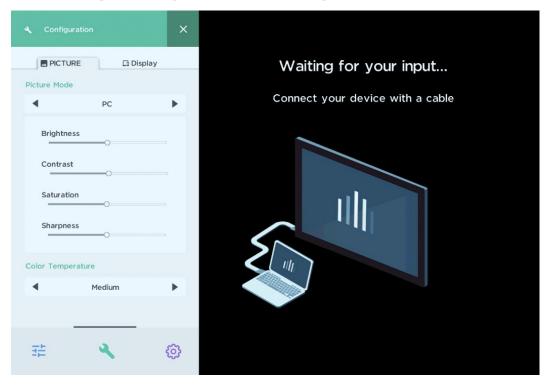
5 Configuration

Tap ⚙ to enter configuration interface. The menu items include **Picture** and **Display**.

Use your finger to tap the screen or press ◄/►/▲/▼ on the remote control to select a menu item, press **OK** to complete the menu switching and option setting. Tap × to exit the setting.
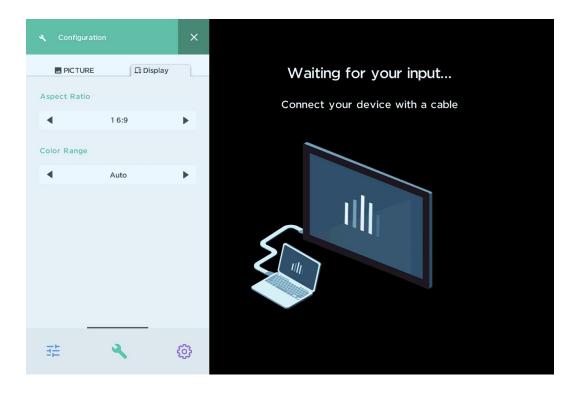
Picture Setting

- **Picture mode:** Tap ◄/► to set the picture mode (Soft > User > PC > Auto > Vivid > Standard). Only in user mode, you can drag the slider to adjust the Brightness, Contrast, Saturation or Sharpness respectively.

- **Color temperature:** Tap ◄/► to set the Color temperature (Medium >Warm >Cool).
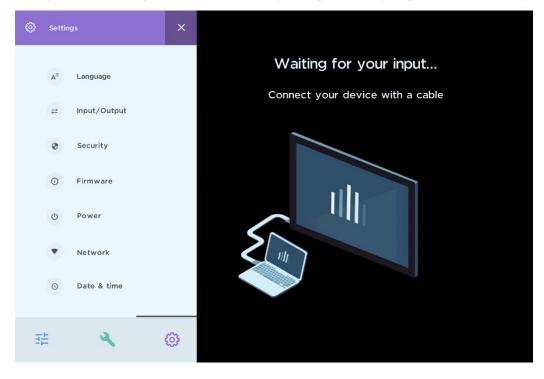

Display Setting

- **Aspect Ratio:** Tap ◄/► to set the aspect ratio the screen display. Options include 16:9, Point-to-point and 4:3.

- **Color Range:** Tap ◄/► to set the color range. Options include 0-255, 16-235, and auto.

6 Settings
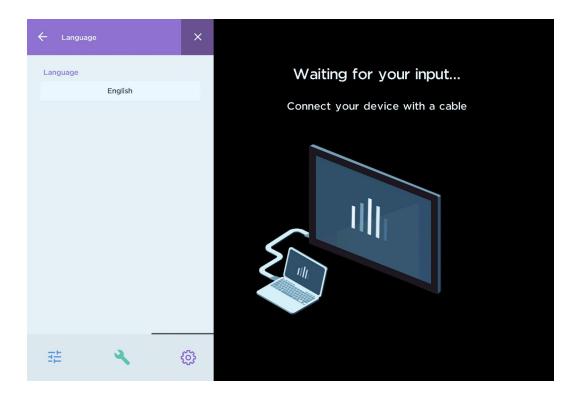
After the interactive touch screen is powered on, press ☰ on the remote control to enter **Settings** interface.

Use your finger to tap the screen or press ◄/►/▲/▼ on the remote control to select a menu item, press **OK** to complete the menu switching and option setting. Tap × to exit the setting.

6.1 Language

Tap **Language** to select language via the remote control or by touch operation. Tap ← back to the previous page, tap × to exit the setting.

6.2 Input/Output

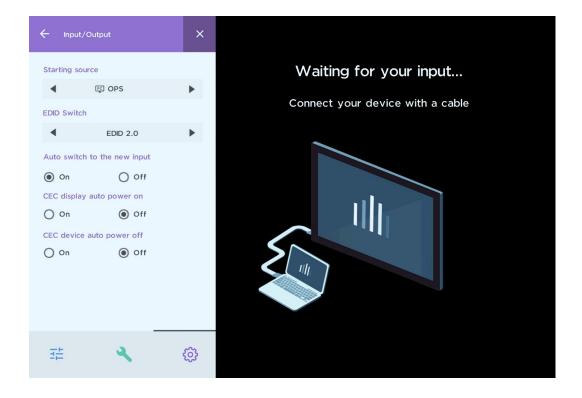Tap **Input / Output** to set input/output via the remote control or by touch operation. Tap ← back to the previous page, tap × to exit the setting.
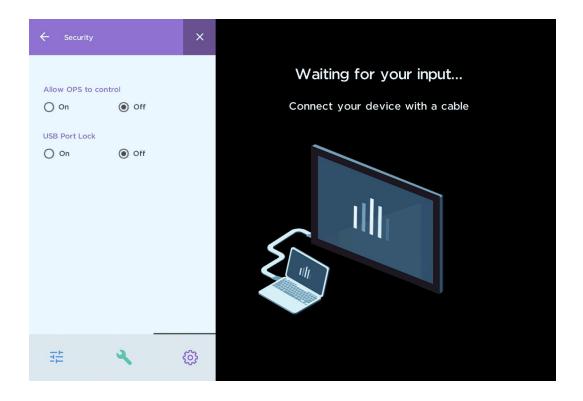
- **Starting source**: Customize settings to connect to the signal source after power on. Tap ◄/► to set the starting source (OPS>Type C >SDM >HDMI 1> HDMI 2> HDMI 3).
- **EDID Switch**: Sets the EDID version of the interactive touch screen. Options include EDID 2.0 and EDID 1.4.
- **Auto switch to the new input**: Tap the icon to enable or disable auto switch to the new input. System can automatically switch to the screen of the newly connected signal source after the function is enabled.
- **CEC display auto power on**: "**CEC Auto Power On**" is enabled, when the HDMI port of the panel is connected to a CEC device (such as a DVD), and both the CEC device and the panel are turned off, if the CEC device is turned on, the panel automatically turns on after receiving command from the CEC.
- **CEC device auto power off**: "**CEC Auto Power Off**" is enabled, when the HDMI port of the panel is connected to a CEC device, and both the CEC device and the panel are turned on, if the panel is turned off, the CEC device automatically turns off after receiving the command; if the CEC device is turned off, the panel automatically turns off after receiving the command.

6.3 Security
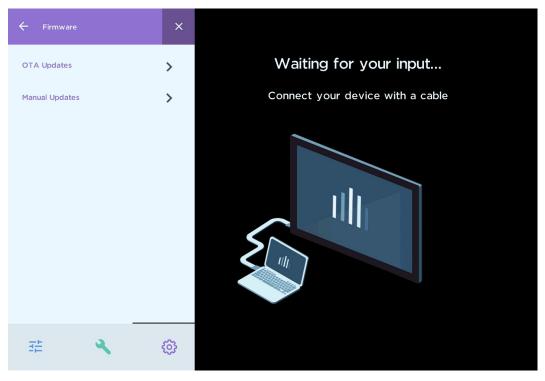
Tap **Security** to allow OPS to control or set USB port lock via the remote control or by touch operation. Tap ← back to the previous page, tap × to exit the setting.

- **Allow OPS To Control**: Tap the icon to enable or disable the function. When you allow OPS to control, Users can control the panel through RS232 serial port in OPS.

- **USB Port Lock**: Tap the icon to enable or disable the function. When you enable the USB lock, USB disk will be locked under the OPS or SDM system, user will not able to read the data from the USB disk, but USB mouse and keyboard could be used. Under the external source, all the USB devices will be blocked.

6.4 Firmware
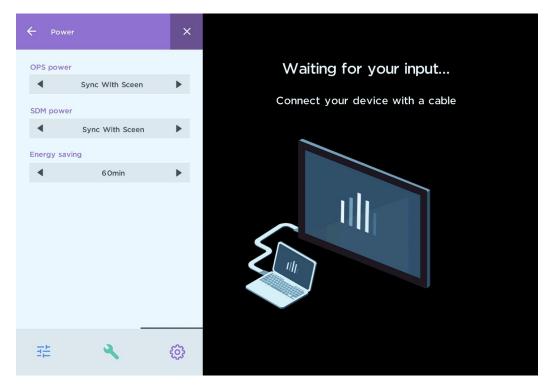
Tap to select OTC Updates or Manual Updates via the remote control or by touch operation.
Tap ← back to the previous page, tap × to exit the setting.

6.5 Power
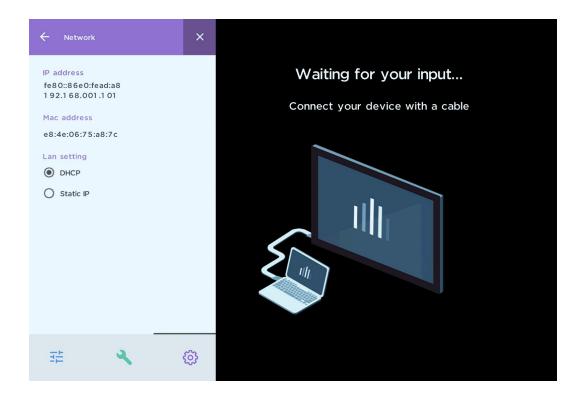
Tap to set OPS power, SDM power and Energy saving via the remote control or by touch operation. Tap ← back to the previous page, tap × to exit the setting.

- **OPS power**: Tap◄/►to set OPS power, options include sync with screen or always on.
- **SDM power**: Tap◄/►to set SDM power, options include sync with screen or always on.
- **Energy saving**: Tap◄/►to set a duration when the screen is left un-operated, the screen will automatic power off. The duration can be set to off, 5min, 10min, 15min, 30min, 60min, 120min or 180min.

6.6 Network
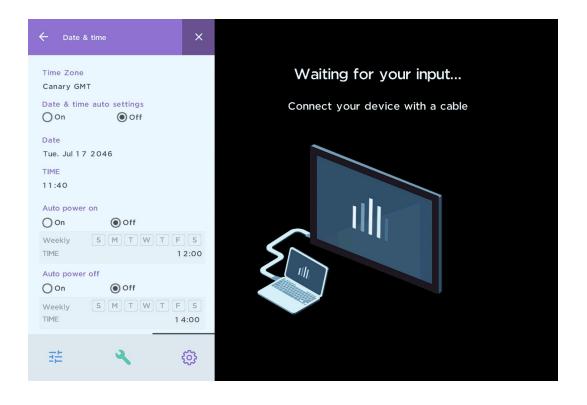
Tap to view the network information, such as IP address and Mac address, change Lan setting via the remote control or by touch operation. Tap ← back to the previous page, tap × to exit the setting.

6.7 Date & time

Tap to set the Date, Time, Time Zone, Auto power on and Auto power off. Before setting the date and time, users should tap **Time zone** to select local time zone. Tap ← back to the previous page, tap × to exit the setting.

- **Time Zone**: Tap to select the time zone for your region.
- **Date & time auto settings**: Tap to enable or disable the function.
- **Set date**: When Date & time auto settings is off, tap to set the date.
- **Set time**: When Date & time auto settings is off, tap to set the time.
- **Auto power on**: When the function is on, tap to set the date and time for the display auto power on.
- **Auto power off**: When the function is on, tap to set the date and time for the display auto power off.

7 ECO Mode

⚠ CAUTION
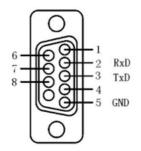
- *Please switch off the panel when it is not used and enable the function of Audio Only when you do not need to watch the display, which help reduce power consumption and save energy.*
- *On the premise of ensuring viewing effect, the energy consumption can be reduced by lowering display brightness.*
- *To better save energy, the Energy Saving function is configured for the interactive touch screen. If no operation is performed in a set time, the interactive touch screen is switched automatically to power off for reducing energy consumption.*

Enter brightness setting on the **Status** menu, tap ◄/► to enter the **ECO** mode(Standard > Auto > Custom > ECO).

- In the **Standard** mode, the screen brightness keeps the same.
- In the **Auto** mode, the display automatically adjusts the screen brightness according to the light in the environment. When the light is strong, the screen brightens. When the light is weak, the screen darkens.
- In the **ECO** mode, the power output is reduced 50%.
- In the **Custom** mode, you can drag the slider to adjust the brightness as your wish.

8 Serial Port Control

The RS-232 port of the interactive touch screen is defined as follows:

Connect RS-232 port to the PC or controlling device. Enable RS-232 serial port connection and complete the following configuration.

Port: COM1 (Set according to PC or controlling device's port number)			
Baud rate	19200	Odd/even check	None
Data bits	8	Stop bit	1

The following table lists button controlling codes. The buttons share same functions with corresponding buttons on the remote control:

Function	Controlling codes	Return codes
Power on	7F 08 99 A2 B3 C4 02 FF 01 00 CF	7F 09 99 A2 B3 C4 02 FF 01 00 01 CF
Power off	7F 08 99 A2 B3 C4 02 FF 01 01 CF	7F 09 99 A2 B3 C4 02 FF 01 01 01 CF
Mute/Unmute	7F 08 99 A2 B3 C4 02 FF 01 02 CF	7F 09 99 A2 B3 C4 02 FF 01 02 01 CF
Switch the sound mode	7F 08 99 A2 B3 C4 02 FF 01 05 CF	7F 09 99 A2 B3 C4 02 FF 01 05 01 CF
Signal source	7F 08 99 A2 B3 C4 02 FF 01 06 CF	7F 09 99 A2 B3 C4 02 FF 01 06 01 CF

Function	Controlling codes	Return codes
Display status	7F 08 99 A2 B3 C4 02 FF 01 09 CF	7F 09 99 A2 B3 C4 02 FF 01 09 01 CF
HDMI 1	7F 08 99 A2 B3 C4 02 FF 01 0A CF	7F 09 99 A2 B3 C4 02 FF 01 0A 01 CF
HDMI 2	7F 08 99 A2 B3 C4 02 FF 01 0B CF	7F 08 99 A2 B3 C4 02 FF 01 0B CF
OPS	7F 08 99 A2 B3 C4 02 FF 01 38 CF	7F 09 99 A2 B3 C4 02 FF 01 38 01 CF
HDMI 3	7F 08 99 A2 B3 C4 02 FF 01 0C CF	7F 08 99 A2 B3 C4 02 FF 01 0C CF
Type C	7F 08 99 A2 B3 C4 02 FF 01 10 CF	7F 09 99 A2 B3 C4 02 FF 01 10 01 CF
SDM	7F 08 99 A2 B3 C4 02 FF 01 16 CF	7F 09 99 A2 B3 C4 02 FF 01 16 01 CF
Volume-	7F 08 99 A2 B3 C4 02 FF 01 17 CF	7F 09 99 A2 B3 C4 02 FF 01 17 01 CF
Volume+	7F 08 99 A2 B3 C4 02 FF 01 18 CF	7F 09 99 A2 B3 C4 02 FF 01 18 01 CF
Menu	7F 08 99 A2 B3 C4 02 FF 01 1B CF	7F 09 99 A2 B3 C4 02 FF 01 1B 01 CF
Return	7F 08 99 A2 B3 C4 02 FF 01 1D CF	7F 09 99 A2 B3 C4 02 FF 01 1D 01 CF
OK	7F 08 99 A2 B3 C4 02 FF 01 2B CF	7F 09 99 A2 B3 C4 02 FF 01 2B 01 CF
←	7F 08 99 A2 B3 C4 02 FF 01 2C CF	7F 09 99 A2 B3 C4 02 FF 01 2C 01 CF
→	7F 08 99 A2 B3 C4 02 FF 01 2D CF	7F 09 99 A2 B3 C4 02 FF 01 2D 01 CF
↑	7F 08 99 A2 B3 C4 02 FF 01 2E CF	7F 09 99 A2 B3 C4 02 FF 01 2E 01 CF
↓	7F 08 99 A2 B3 C4 02 FF 01 2F CF	7F 09 99 A2 B3 C4 02 FF 01 2F 01 CF
Freeze	7F 08 99 A2 B3 C4 02 FF 01 3B CF	7F 09 99 A2 B3 C4 02 FF 01 3B 01 CF
Adjust volume	7F 08 99 A2 B3 C4 02 FF 05 XX CF	7F 09 99 A2 B3 C4 02 FF 05 XX 01 CF Notes: XX indicates current volume value, range: 0-100 (XX is a hexadecimal value, range: 00~64).

Function	Controlling codes	Return codes
Increase backlight brightness	7F 08 99 A2 B3 C4 02 FF 01 47 CF	7F 09 99 A2 B3 C4 02 FF 01 47 01 CF
Decrease backlight brightness	7F 08 99 A2 B3 C4 02 FF 01 48 CF	7F 09 99 A2 B3 C4 02 FF 01 48 01 CF
Adjust backlight brightness	7F 08 99 A2 B3 C4 02 FF 09 XX CF	7F 09 99 A2 B3 C4 02 FF 09 XX 01 CF Notes: XX indicates backlight brightness, range: 0-100 (XX is a hexadecimal value, range: 00~64).
Sound only	7F 08 99 A2 B3 C4 02 FF 01 15 CF	7F 09 99 A2 B3 C4 02 FF 01 15 XX CF Notes: XX=01 ON; XX=00 OFF.
Set the sound mode	7F 08 99 A2 B3 C4 02 FF 03 xx CF	7F 09 99 A2 B3 C4 02 FF 03 XX 01 CF Notes: 00: Standard; 01: Meeting; 02: Theater; 03: Classroom; 04: User.

9 FAQ & Troubleshooting

Before you contact the technical support staff, please identify a fault according to the following table. If the fault cannot be restored based on the solutions, contact the local distributor for help. For your safety, please do not repair the product by your own.

Failure	Possible Cause	Solution
The service program fails to be connected.	The drive program is not correctly installed.	Install the drive program correctly.
	The USB port (lead) is not connected or is faulty.	Change the USB lead or check if the USB port is faulty.
	The infrared tube is blocked.	Ensure that the surrounding infrared tubes are not blocked.
Repositioning is required every time the panel is switched on.	The computer is equipped with a recovery card.	Disable computer protection and perform the positioning again.
The calibration is inaccurate.	The positioning is not performed properly.	Use the pen provided with the panel to perform positioning again.
Not sound and image	• Check whether the power plug is inserted into the power outlet and whether the panel is powered on. • Check whether the rocker switch on the interactive touch screen is switched on. • Check whether the power button on the panel is pressed. • Check whether the video and audio input cables are connected correctly. • Check whether the panel is switched to the right signal source. • Check the settings on image brightness and contrast. • Check the volume.	

Failure	Possible Cause	Solution
Image is normal, but no sound	- Check the volume. - Check whether the **MUTE** button on the remote control is pressed. - Check whether the audio cable between the PC and interactive touch screen is connected correctly.	
No image or the image is black and white	- Modify the color settings. - Check the color system.	
Image or sound is interrupted	- Find out the electric appliance that causes the interference and move it away from the interactive touch screen. - Do not share the power socket of the panel with the electric appliance that causes interference.	
The remote control fails	- Change the batteries. - Clean the signal emitter at the top of the remote control. (Check whether it is blocked.) - Check contacts of the batteries.	
Computer cannot be started (applicable for models with computers)	- Check whether the PC adapter is correctly connected and whether the PC is powered on. - Check whether the PC is connected correctly to the interactive touch screen.	

The following symptoms are not faults:

- A very few of constantly bright or dark pixels, such as tiny red, blue, green or dark points, may exist on the LED. This symptom is not a fault and does not affect running functions of the panel.
- Slight sound may occur due to the backlight adjustment or ventilation. This is a normal symptom.
- The image and sound are normal. However, you can sense static electricity when you touch the LED and metal back cover. This is a normal symptom.
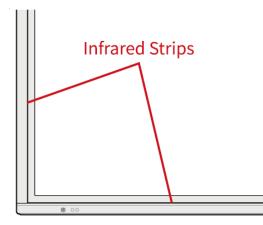
10 Maintenance Tips

- Do not put or install the product near a heat source or under direct sunlight, or in dusty or humid places, or somewhere the product may be hit or damaged by mechanical vibration. To maximize the performance, it needs to be put away from equipment such as grid, large metal objects and radar stations as far as possible.

- Do not wipe the panel with any chemical reagent. Solvents may damage the enclosure or paint. If the panel is stained by dust, cut off the power and then clean the panel using a dried cloth with a little of warm water. Use a clean soft cloth to clean the LED of the panel.

- Do not frequently switch on and off the product, which may shorten the product service life. After the panel is switched off, wait for three minutes before switching it on again. If the product is not to be used for a long period, please power off the product and pull out the power plug.

- Do not maximize the brightness and contrast of the LED for a long period of time, which may shorten the LED service life.

- Do not use a hard object to write on the interactive touch screen, which may scratch the LED.

11 Clean the Infrared Tube

The interactive touch screen uses the horizontal and vertical infrared matrix to detect and locate the user's touch. The screen is surrounded by an infrared tube (including the infrared acceptor and emitter), which forms an infrared net covering on the screen surface. When a user touches the screen, fingers or other opaque objects block the infrared rays that cross the touch point, which helps the controller detect the coordinate position of the touch point.

Dust is easily retained on the screen surface due to its long-term exposure in the air and causes ineffective touch or inaccurate positioning. Therefore, you need to clean the infrared tube around the screen regularly.

Infrared Strips

12 Technical Parameters

Model	TT-5521IP	TT-6521IP	TT-7521IP	TT-8621IP
Display				
Backlight	LED			
Display Area	47.62 x 26.79in /1209.6 x 680.4 mm	56.24 x 31.63in /1428.48 x 803.52 mm	64.97 x 36.55 in /1650.24 x 928.26 mm	74.61 x 41.97 in / 1895.04 x 1065.96 mm
Active Screen Size	55 inch	65 inch	75 inch	86 inch
Display Ratio	16:9			
Resolution	3840 x 2160 Pixel			
Display Colors	8 bit+FRC, 1.07 billion colors	8 bit+FRC, 1.07 billion colors	8 bit+FRC, 1.07 billion colors	10 bit, 1.07 billion colors
Brightness	$\geq$ 400 cd/m^2			
Contrast	$\geq$ 3200:1			
Response Time	$\leq$ 8 ms			
Life Time	$\geq$ 50000 h (Min.)			
Speaker				
Speaker Position	Bottom			
Max. Power Output	2 x 20 W	2 x 15 W		
Electrical				
Power Consumption	Maximum $\leq$ 480 W Standby Mode $\leq$ 0.5 W	Maximum $\leq$ 500 W Standby Mode $\leq$ 0.5 W	Maximum $\leq$ 620 W Standby Mode $\leq$ 0.5 W	Maximum $\leq$ 700 W Standby Mode $\leq$ 0.5 W

Model	TT-5521IP	TT-6521IP	TT-7521IP	TT-8621IP
Working Voltage	AC 100 V – 240 V, 50 Hz / 60 Hz			
Touch				
Touch Surface	Anti-glare tempered glass			
Transparency	88% ± 3%			
Touch Points	20 Points			
Writing Tools	Finger			
Scan Speed	≤ 10ms			
Communication Interface	USB-A			
Transportation/Storage				
Storage Temperature/ Humidity	-15℃~55℃/20～90％RH(Non coagulation)			
Working Temperature/ Humidity	0℃-40℃/20～80％RH(Non coagulation)			
Mounting (optional)	Wall-mounted/Floor Stand			
Outline Dimension	1290 x 764 x 86mm	1509 x 865 x 86mm	1731 x 1010 x 86mm	1977 x 1150 x 86mm
Packing Dimension	1417 x 221 x 871mm	1640 x 221 x 1002mm	1859 x 247 x 1136mm	2119 x 275 x 1281mm
Net Weight	approx. 28kg	approx. 35.5kg	approx. 49kg	approx. 59kg
Gross Weight	36 ± 2kg	45.5 ± 2kg	63.5 ± 2kg	76 ± 2kg
Ports				
Rear ports	HDMI 1(ARC)In x 1, HDMI 2/3 In x 2, USB (Touch) x 3, HDMI Out x 1, Type C x 1, USB 3.0 (Public) x 2			
	SPDIF Out x 1, Audio Out x 1, Microphone In x 1, Lan In x 1, RS232 x 1, USB 3.0 (FW) x 1, OPS Slots (4K@60Hz), SDM x 1			
Firmware Version	V1.32			

13 More Information

For More Information

Please visit our website (https://newline-interactive.com) and choose
Support > D**ownloads** > **IP+ Series** to download **User Manual** for detailed instruction manual.

Contact Us for Support

Please email us at support@newline-interactive.com.

National Service Hotline: +1 888 233 0868

The company is committed to product updates and technical improvements. The technical parameters and specifications are subject to change without prior notice. The pictures in this manual are for reference only.