newline

NT+ Series

Intelligent Display
User Manual V2.0

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Welcome to the world of **Newline**.

Thank you for choosing the **Newline** NT^{+}series Interactive Intelligent Display. Please use this document to get the most out of your screen.

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 machine 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.

Energy Star Compliance.

Signage Displays with Plug-in Module.

As an ENERGY STAR Partner, Newline Interactive Inc., has followed the EPA's enhanced Product qualification and certification process to ensure that the products marked with the ENERGY STAR logo are ENERGY STAR qualified per the applicable ENERGY STAR guidelines for energy efficiency. The logo appears on the pen tray near front connections on all ENERGY STAR qualified Signage Displays.

The ENERGY STAR program for Signage Displays was created by EPA to promote energy efficiency and reduce air pollution through more energy-efficient equipment in offices, classrooms and factories. One way that a product achieve this goal is by using a power management feature to reduce power consumption when the product is not in use.

For TT-5523NT, TT-6523NT, TT-7523NT and TT-8623NT sleep mode can be initiated in a couple different ways. Users can take the action of pressing the power button on the display, or a remote command can be sent via RS232. The display will also go into sleep mode without user action after one hour of inactivity.

TT-5523NT, TT-6523NT, TT-7523NT and TT-8623NT can exit sleep mode by the user pressing the power button, or by the proximity sensors detecting a user's presence, or through a remote command via RS232. In the event of a proximity detection, the display will transition from sleep mode to another low power mode, STAND BY.

In the event that brightness settings or power mode settings are changed by the user, energy consumption of the display may increase beyond the limits required for ENERGY STAR certification.

Additional information on the ENERGY STAR program and its environmental benefits are available on the EPA ENERGY STAR Power Management website at http://www.energystar.gov/powermanagement.

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For production, above information will need to be available for the Energy Star V8 build from 27th January 2020.

Manufacturer-reported maximum luminance LMax Reported is 400cd/m^2.

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 machine. Serious injury or property damage may be caused by improper operations. Do not try to repair the machine on your own.

⚠ WARNING	
	Disconnect the machine from power supply immediately if major failures occur. Major failures include the following: • Smoke, peculiar smell or abnormal sound is discharged from the machine. • No image or sound is displayed, or the image error occurs. In the preceding scenarios, do not continue to use the machine. Disconnect power supply immediately and contact professional staff for troubleshooting.
	Do not drop liquid, metal or anything combustible into the machine. • If any liquid or metal is dropped into the machine, power off the machine and disconnect power supply, then contact professional staff for solutions. • Pay attention to children when they are close to the machine.
	Put the machine on a stable surface. An unstable surface includes and does not limited to an inclined plane, a shaky stand, desk or platform, which might cause turnover and damage.
	Do not open the cover or change the machine on your own. High voltage components are installed in the machine. When you open the cover, 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 specified power supply. • To prevent the machine from being damaged, do not use any types of power cables other than the one provided with the machine. • Use a three-wire socket and ensure that it is properly grounded. • Pull out the power plug from the socket if the machine is not used for a long period.
	Clean the dust and metal on the power plug regularly. • Fire or electric shock may be caused if the machine is powered on, when you are cleaning. • Pull out the power plug before cleaning it with a dried cloth.
	Do not put items on the top of the machine. • Do not put items, such as a container for liquid (a vase, flowerpot, cosmetics or liquid medicine) on the top of the machine. • If any water or liquid is spilled on the machine, a short circuit may occur and cause fire or electric shock. • Do not walk on or hang any items on the machine.

⚠ WARNING

Do not install the machine in an improper place.

- Do not install the machine 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 machine or electric shock under extreme conditions.
- Do not put exposed fire source, such as an ignited candle, on the machine.

Pull out the power plug during thunderstorms.

- Do not touch the machine during a lighting storm to avoid 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 machine in high temperature environments.

- Do not install the machine near a heat source, such as a radiator, a heat reservoir, a stove or other heating machines.
- Do not expose the machine to direct sunlight, which may cause high temperatures and subsequent faults in the machine.

For transport:

- Pack the machine for transport or maintenance by using the cartons and cushioning material provided with the machine.
- Vertically move the machine during transport. The screen or other components are easily broken if the machine is moved by an improper way.
- Before you move the machine, disconnect all external connections and separate all toppling preventing machines. Move the machine 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 machine.

- Any overheated components may cause fire, damage the machine, and shorten the service life.
- Do not lay the machine down where the venting surface will be covered.
- Do not install the machine on a carpet or cloth.
- Do not use a cloth such as table cloth to cover the machine.

⚠ CAUTION

Keep away from the machine when you use a radio.

The machine complies with the international EMI standard to pervent 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 machine.
- Keep the radio away from the machine.

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 correct electrodes (positive and negative).
- Do not install and use 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 firing.
- Dispose of the used battery based on your local regulations.

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 machine 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 machine only. Do not use it on other machines.

Additional advice:

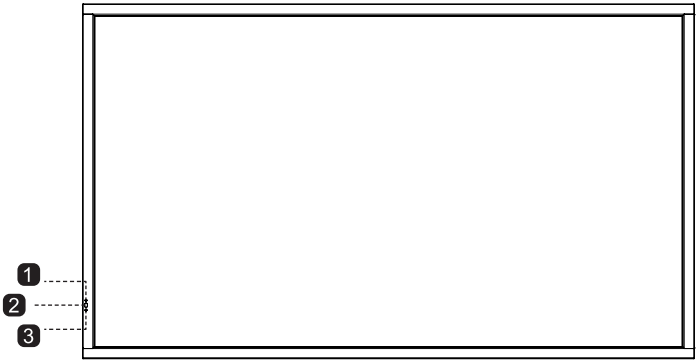
- Use the machine in an environment with comfortable lighting. It is harmful to your eyes to watch in a too bright or too dark environment.
- Relax your eyes after a period of time for watching.
- Keep sufficient distance from the machine to protect your eyes and prevent eyestrain.
- Adjust the volume 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.

1 Parts and Functions

Parts

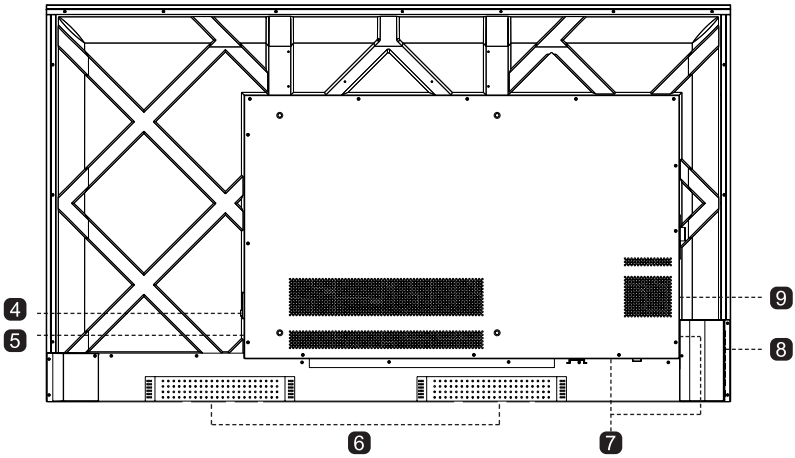
◆Front View

● TT-5523NT / TT-6523NT / TT-7523NT / TT-8623NT / TT-9823NT:

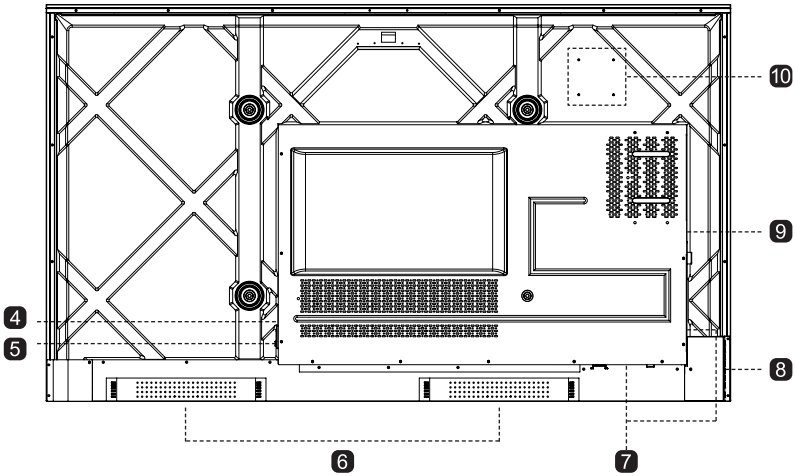


◆Rear View

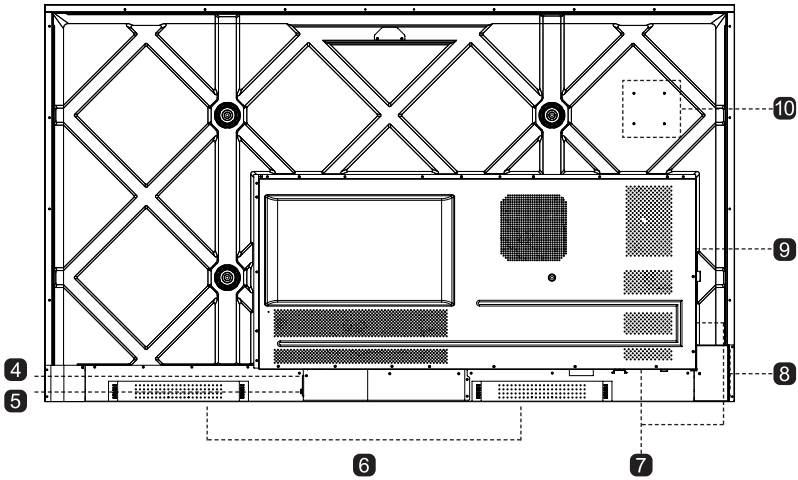
● TT-5523NT:



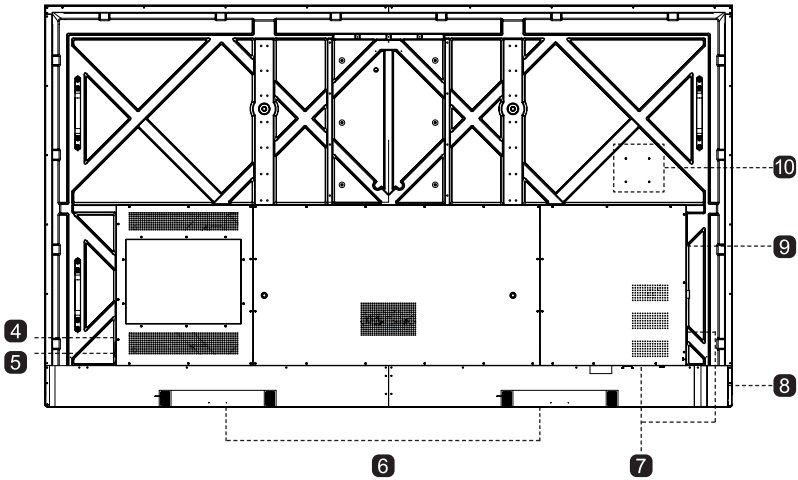
● TT-6523NT:



● TT-7523NT / TT-8623NT:



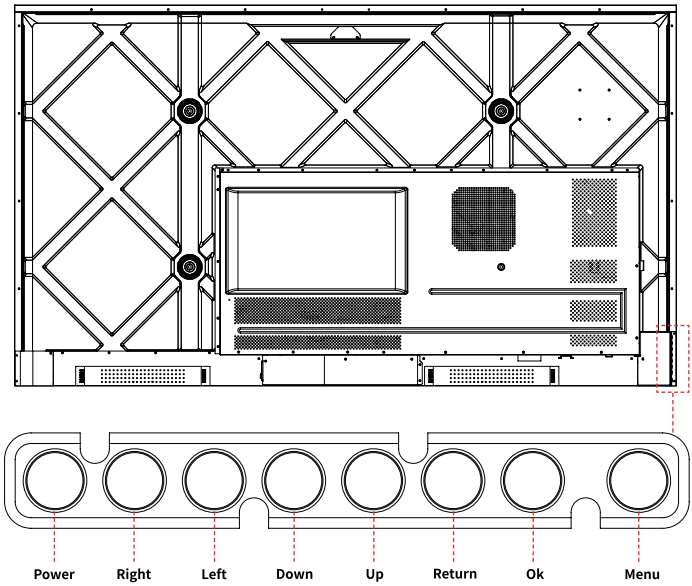
● TT-9823NT:



1	Indicator Light	6	Speakers
2	Remote Control Receiver	7	Rear Ports
3	Light Sensor	8	Rear Buttons
4	Power Supply Plug	9	Wi-Fi Module Slot
5	Power Switch	10	Tiny VESA Mount

Buttons and Ports

◆ **Rear Buttons**



Button	Operations	Functions
Power	Short press	Power on/off
Right	Short press	Switch to Right
Left	Short press	Switch to Left
Down	Short press	Switch to Down
Up	Short press	Switch to Up
Return	Short press	Return to Previous/Exit
Ok	Short press	Confirm/OK
Menu	Short press	Open the menu page

Note

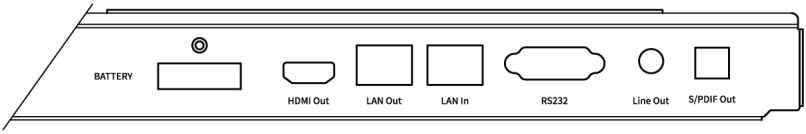
Go to **Settings** > **Other Settings** > **Power** to turn on the sleep mode and then press the power button to put the display into sleep mode.

◆Rear Ports

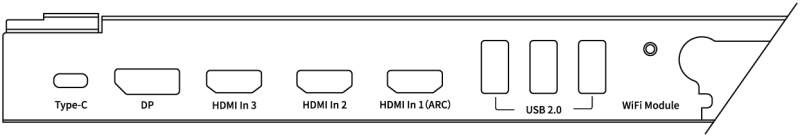
CAUTION

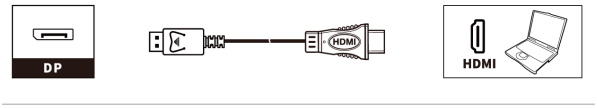
- USB 2.0 ports for Android system only.
- Type C output port supplies DC 5V/3A power.
- Please use the supplied cable in the accessory box or the HDMI association certified shielded cable to better ensure the signal quality.
- While HDMI and Display Port offer support for cables of varying lengths, the maximum cable length that Newline recommends for optimal performance is 3 meters (10 feet) for HDMI and 1.8 meters (around 6 feet) for Display Port. Using cable longer than recommended length may cause data loss and a negative impact to display quality.

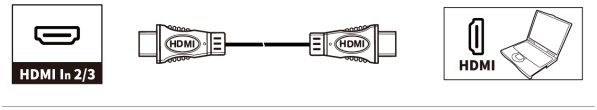
● Lower interface

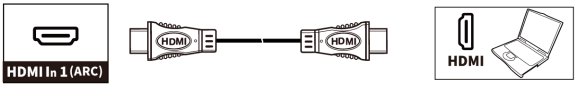


● Right interface

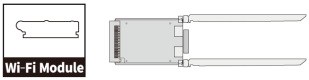


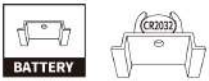


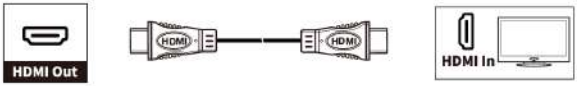



HDMI In 1(ARC)
HDMI
HDMI

USB2.0


Wi-Fi Module


BATTERY
CR2032


HDMI Out
HDMI
HDMI
HDMI In

LAN Out
LAN In

LAN In
LAN Out

RS232
RS232

Line Out
Line In

S/PDIF Out
S/PDIF In

Type-C
Type C

Note

Please do not connect a 2.4G wireless mouse and USB 3.0 devices simultaneously, on the left back side of the display, in order to avoid the interference.

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 under direct sunlight or near an overheating heat source.

Buttons	Operations
	Power on/off.
	Mute/Unmute Audio.
	Go back to Welcome page
	Open the system menu.
	Return to Previous/Exit.
	Up/Down/Left/Right.
	Confirm/OK.
	Mouse left Button:pointing, clicking, etc. Please enable the mouse then use it.
	Open/turn off the wireless mouse mode.
	Mouse Right Button: click to exit Android app. Please enable the mouse mode then use it.
	Switch back light mode
	Ineffective button
	Short Press: Increase the sound volume Long Press: Increase the sound volume continuously.
	Short Press: Decrease the sound volume. Long Press: Decrease the sound volume continuously.
	Freeze the current screen, press again to exit freeze function.
	Enable sound only mode, press again to exit the mode.
Keyboard	An input device of the display, it can input English letters, Numbers, Punctuation, etc.
Remote control receiver	When using the 2.4G wireless mouse, please connect this Receiver with the USB port on the left back side of the display.

◆Remote Control Pairing

If a remote control never pairs with a remote control receiver, just load up the battery, it will get into pairing mode with LED light on at A side. Then insert the receiver and when you see the LED light off, it means pairing successfully.

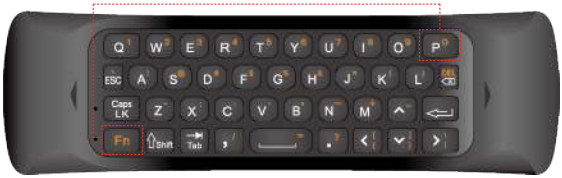
A Side

B Side

If your remote control had ever been paired with a receiver but you lost it accidentally, the remote control can be paired with a new receiver referring to the steps:

Step 1:Keep B side upwards and press **Fn+ P** button at the same time for 5 seconds until LED light on at A side;

Long press for 5 seconds



Keep B side upwards

Step 2: Insert new receiver. When the light flickers triple times and off, it means pairing successfully. The remote will exit from pairing mode after 80 seconds if no receiver is inserted, and the LED light will be off.

🕮 Note

You must keep B side upwards when you are pressing the button, please do not turn it over during this period.

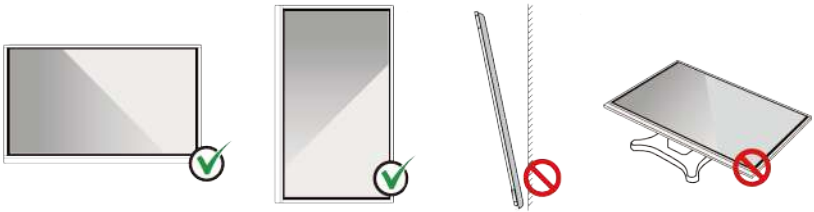
2 Installation Guide

Safety Precautions

◆Installation Environment

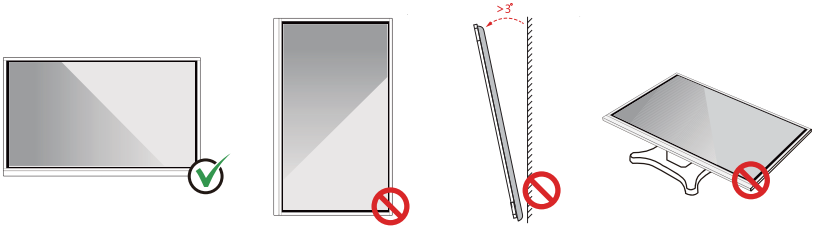
◆Installation Direction

- 55/65inch



Hang the Product Horizontally | Portrait installation | Do Not Install Tilted | Do Not Lay Flat

● 75/86/98inch



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

Installation Precautions

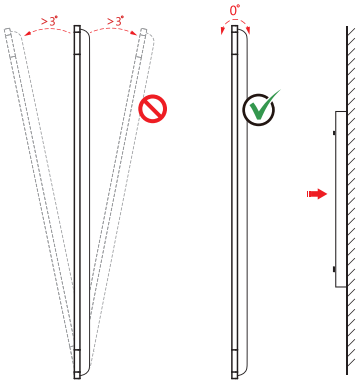
- When using a mobile stand, ensure that the weight of the machine is less than the loading capacity of the mobile stand.
- When using the wall-mount bracket, ensure that the wall can support the weight of the machine. We recommend that the wall surface be reinforced and have a loading capacity 4 times of the weight of the machine. 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 machine.
- Do not install the machine where it might be hit by a door.

◆Vertical installation

When installing, try to keep the machine vertical. The vertical tilt range allowing for wall-mount installation is ±3 degrees. Excessive tilt angle may cause the screen glass to fall off or the machine to collapse.

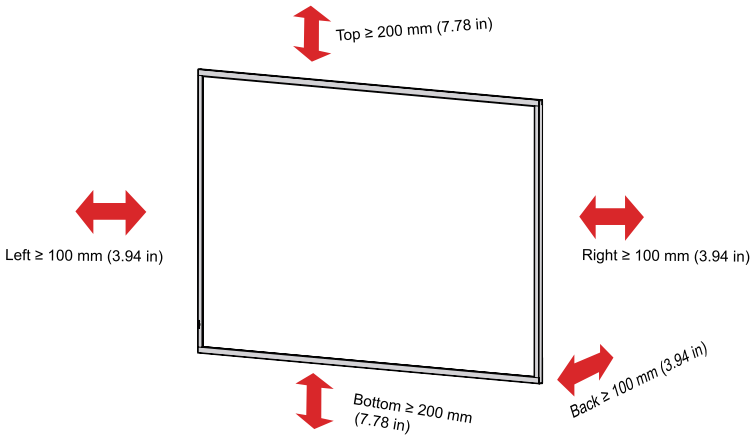


Note

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 air conditioning environment. We recommend keeping certain distances from the side of the machine to the wall or panels. Ventilation requirements are shown in following figure.



Installation

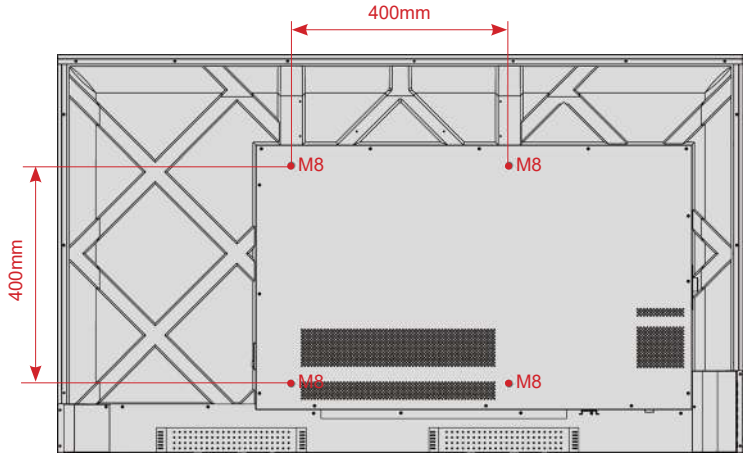
The dimensions of the four bracket mounting holes on the back panel are VESA MIS-F compliant. Use metric M8 screws with length of 10 mm to 15 mm (0.40 to 0.59 in) to secure the machine with the mounting system. Dimensions of the mounting holes on the back panel are shown on the following figure.

- TT-5523NT: 400 x 400 mm / 15.75 x 15.75 in;
- TT-6523NT: 600 x 400 mm / 23.62 x 15.75 in;
- TT-7523NT / TT-8623NT: 800 x 400 mm / 31.50 x 15.75 in;
- TT-9823NT: 800 x 600 mm / 31.50 x 23.62 in.
- Tiny VESA Mount: 75 x 75 mm / 2.95 x 2.95 in.

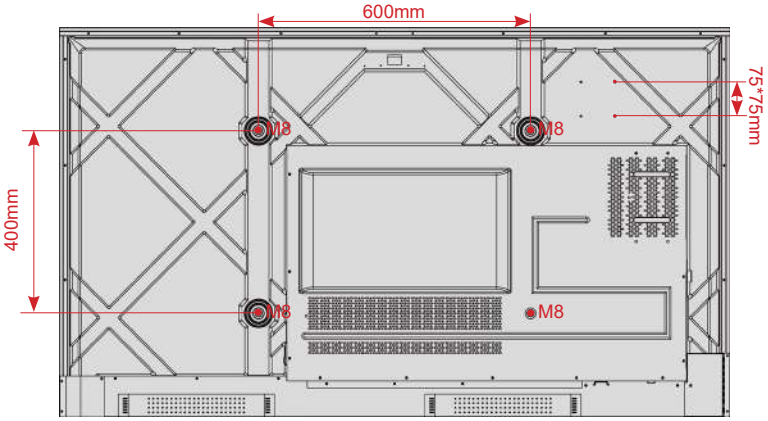
Note

- Consult a professional installer to install the machine.
- Please do not place mounting pieces over the speaker when installing TT-5523NT.
- Only TT-5523NT and TT-6523NT support portrait installation. Consult Newline for choosing a proper wall mounting bracket.

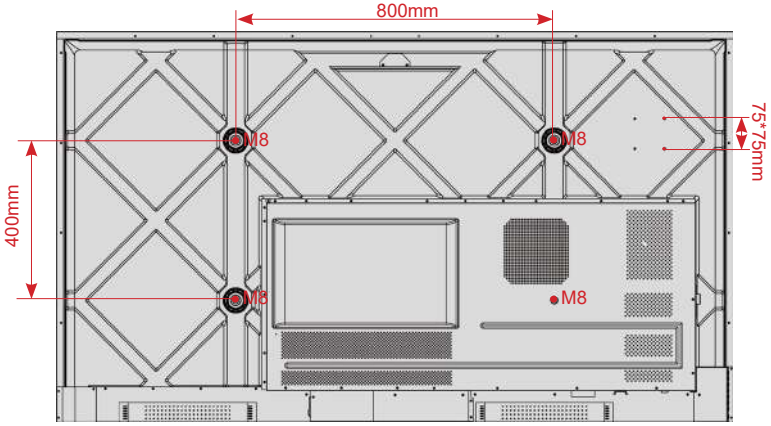
55”



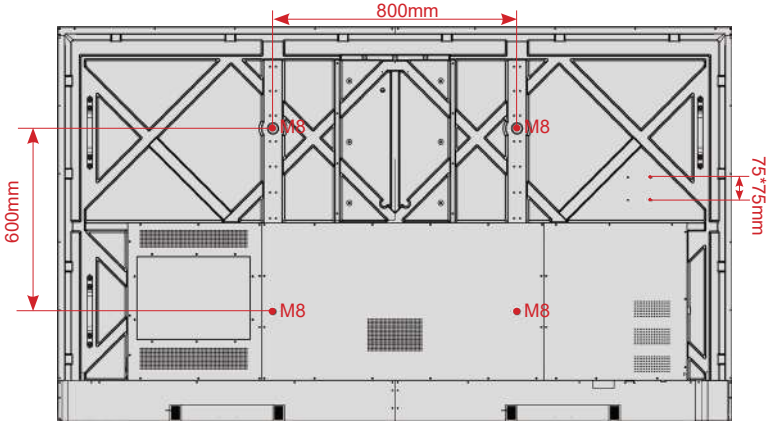
65”


600mm
75*75mm
400mm
M8
M8
M8
M8

75/86”


800mm
75*75mm
400mm
M8
M8
M8
M8

98”


800mm
75*75mm
600mm
M8
M8
M8
M8

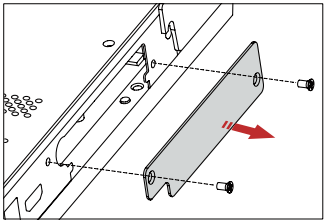
Installing the Wi-Fi Module

CAUTION

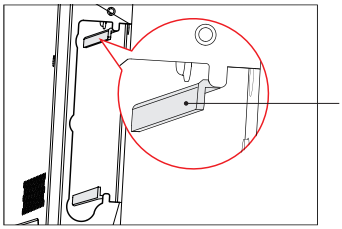
- Wi-Fi Module does not support hot plugging. Therefore, you must insert or remove the Wi-Fi Module when the display is powered off. Otherwise, the display or Wi-Fi Module may be damaged.
- Wi-Fi Module is optional, please buy from Newline if you need it.

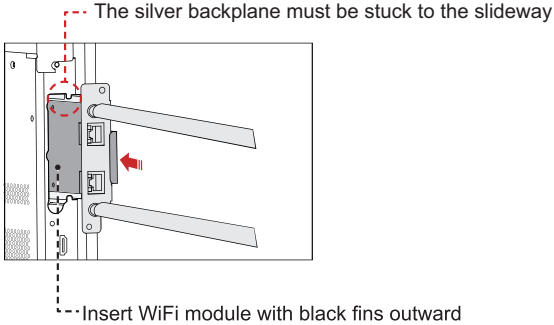
Perform the following steps to install the Wi-Fi Module.

Step 1: Unscrew the 2 screws on the Wi-Fi Module port and remove the shielding cover.



Step 2: Insert the Wi-Fi Module into the port on the rear of the display until firmly seated, using the 2 screws to secure it.





3 Turning On/Off

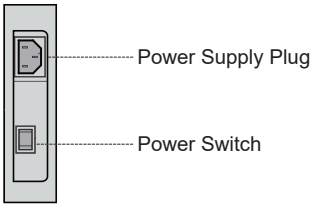
Power On

Step 1: Plug the power supply into the power outlet fully and plug the power connector into the side of the machine. Ensure the power is in the range of 100 V to 240 V with frequency at 50 Hz/60 Hz ± 5%. The power current must be grounded.

Note

The power outlet should be installed near the machine and shall be easily accessible.

Step 2: Flip on the power switch located on the side of the machine to "**On**".



Step 3: Press the "Power" button on the rear button or ⏻ on the remote control.

Power Off

Step 1: Press the "**Power**" button on the rear button or press ⏻ on the remote control, the power indicator will turn to red.

Step 2: If you are not going to use the display for an extended period of time, we recommend you to switch the power switch to "**Off**".

4 Operating the Intelligent Display

Boot-up Screen

When the display is turned on, screen will show the boot-up page. As shown in the following figure.

Welcome page

System enter the Welcome page after boot-up. Welcome page will display logo, time, date and status icons, as shown in the following figure.

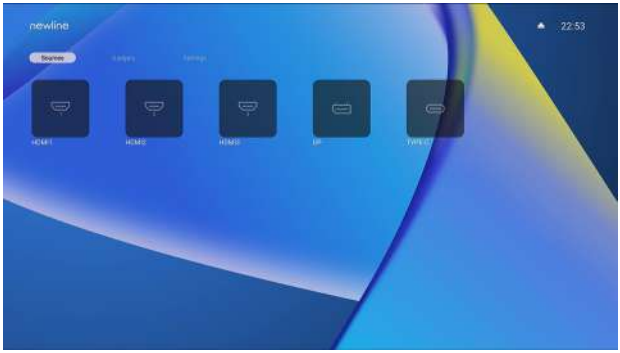
◆**Status Icons**

Icon	Functions
	When there is an update, the icon will appear.
	When the mute function is on, the icon will appear.
	When the freeze function is on, the icon will appear.
	When there is an USB memory detected, the icon will appear.
	Display the current state of the network. If Wi-Fi and LAN are connected at the same time, LAN is preferred.
	If the display is connected to a wireless network, the icon will appear.

Menu Page

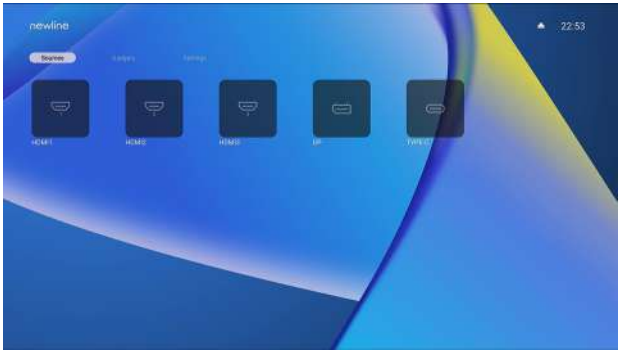
On the welcome page, press the menu button on the remote control or the **Menu** button on the rear button to view menu page. The menu items include **Sources**, **Gadgets** and **Settings**.

Press ◄/►/▲/▼ on the remote control to select a menu item, press ✓ to complete the menu switching and option setting in the menu. If you don't want the menu page, press ↩ to exit the menu page.



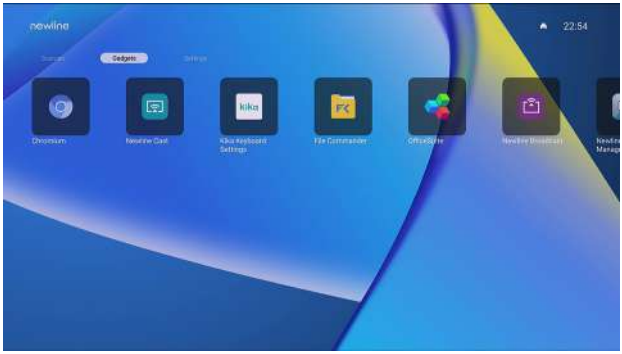
Source

Select the **Source** item in the menu to enter the source interface, all the source options display in this interface, including HDMI 1, HDMI 2, HDMI 3, Type C, Display port. The icon without signal source connected is gray, and the icon with signal source connected is white.



Gadgets

Gadgets displays all pre-installed applications. Click the icon of an application to run the application.



Name	Icons	Functions
Chromium		Click this icon to enter chromium application.
Newline Cast		Click this icon to enter the Newline Cast application.
Kika Keyboard settings		Click this icon to enter the keyboard setting.
File Commander		Click this icon to open the File Manager and you can explore all internal and external files on the display.
Officesuite		Click this icon to enter the Office suite application. In this application, you can view office files, including excel, word, power point, and PDF files.
Newline Broadcast		Click this icon to enter the Newline Broadcast application.
Newline VCS powered by TSN		Click this icon to enter the Newline VCS application.
Newline Display Management		Click this icon to enter the Newline Display Management application.

◆Newline Cast

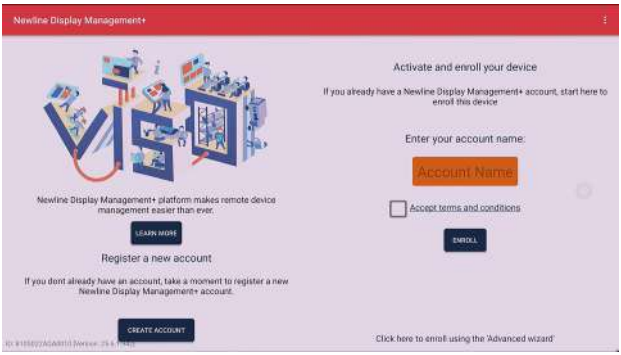
Multiple devices can be cast wirelessly to the display through several casting modes (AirPlay, Chrome Browser, DisplayNote, Windows/macOS software etc.).
To Cast:
Click Newline Cast on the Gadgets page to enter screen sharing mode. On screen directions will appear for you to follow in order to wirelessly cast to the display, as shown in the following figure:

◆Newline Broadcast

Newline Broadcast can help you share your screen in real-time from your Newline display to any participant connected. Easily invite up to 200 participants to connect their own device from the meeting room, classroom, lecture theater or any other place in the world with a network connection.

◆Newline Display Management

Newline Display Management Plus is a remote display management solution that enables users to centrally manage the Newline displays from the comfort of their desk. Users can deploy and install apps, configure display settings, and push updates without communicating back and forth.

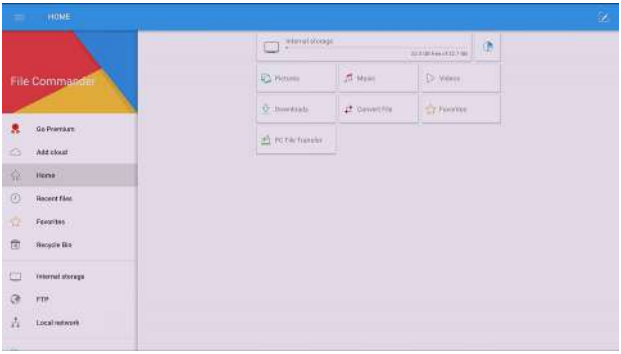


📖 Note

Please visit our website at www.newline-interactive.com and navigate to Products > Software Solutions to obtain more details about Newline Cast, Newline Broadcast, and Newline Display Management.

◆File Commander

On the **Gadgets** page, click **File Commander** to enter the **Files** application, you can click the submenu at the left side according to requirements, preview internal storage, external storage devices connected via the USB ports, cloud stored files, FTP uploaded files, and local network files, as shown in the following figure.

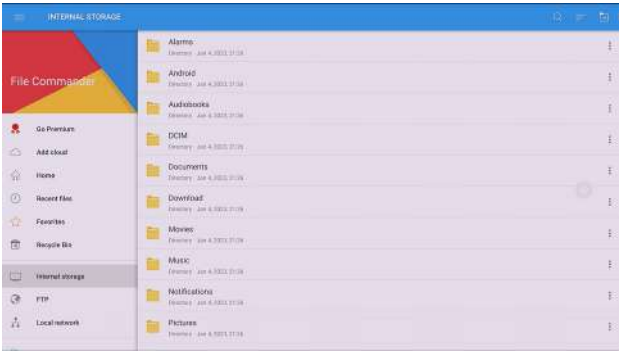


● **Icons on the top of right corner**

Icons	Function
	Click to search the files by files name
	● The system supports two view modes: list and grid. You can click on the top right corner to switch or view modes. ● Click to display files based on name, type, size, and modification.
	Click to create new file
	Click to create new folder
	Click to paste the selected image
	Click to delete the selected image
	Click to cut the image
	Click to copy the image
	Click to move the image to other files

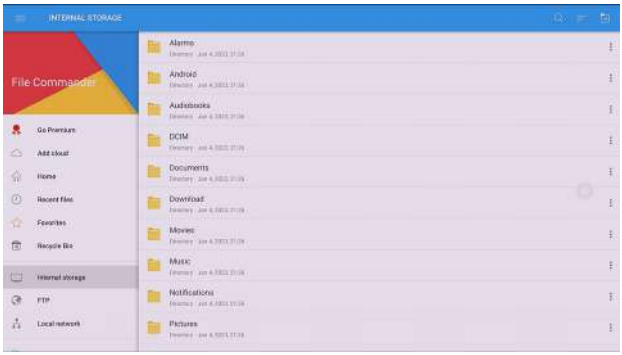
● **File Management**

Display supports connection to USB flash memory. Enter the File application, you can preview all files in the internal storage and storage devices connected via USB ports and select, copy, paste, delete and search for files.

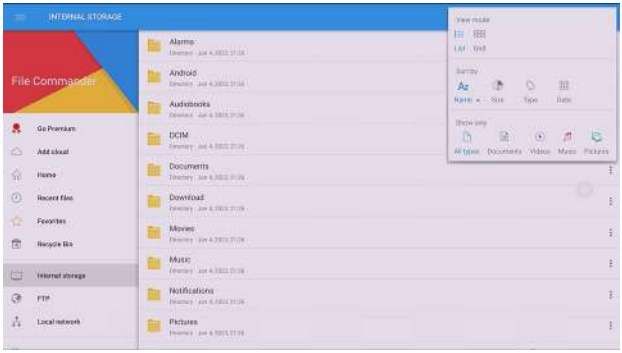


- **File Filtering**

  You can click the menu at the left side to display files by types, for example: **Documents**, **Pictures**, **Music**, **Videos**, **Archives** and **Downloads**.



  You can also click at the top right corner to filter files by **View mode**, **Sort by**, **show only**.



● **File Search**

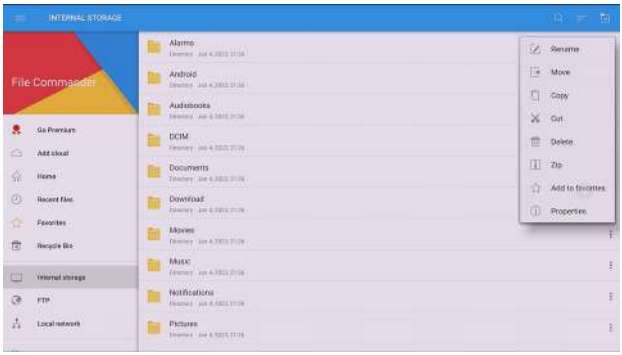
Enter the **Files** application, and click in the dialog box that is displayed, enter keywords in the search box according to requirements. The system will display a list of files that match the keywords.

Note

- Use the keyboard on remote control to enter keywords.
- Use mouse function of remote control to click the soft keyboard on screen to enter keywords.

● **File Operation**

Enter the Files application. You can create folders according to requirements, select files, and set **rename/move/copy/cut/delete/open as/share/zip**. For details on other operation, click ⋮ in the right side for more operation.



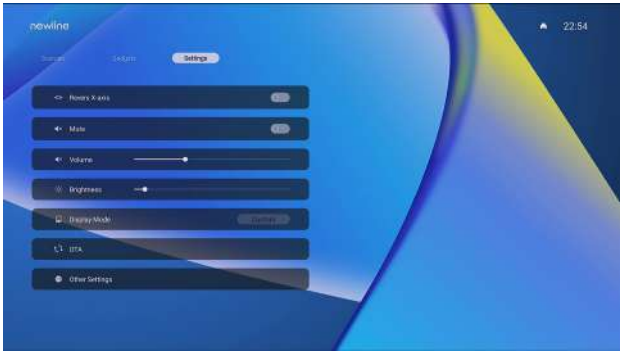
Note

After entering the files interface, select the file items using the mouse function of remote control.

Settings

Select the Setting item to enter the setting interface, this interface displays **Vertical Mode**, **Revers X-axis**, **Mute**, **Volume**, **Brightness**, **Display Mode**, **OTA** and other settings. You can select the corresponding option to set as needed.

- **Vertical Mode**: Click the button to enable and disable the vertical mode. 55inch and 65inch support both vertical mode and horizontal mode. 75inch, 86inch, 98inch only support horizontal mode.
- **Revers X-axis**: Click the button to enable and disable the Revers X-axis.
- **Mute**: Click the button to enable and disable the mute function.
- **Volume**: Drag the slider to adjust the volume.
- **Brightness**: Drag the slider to adjust the brightness.
- **Display Mode**: Click the button to change the display mode (Eco > Auto > Standard > Custom)
- **OTA**: Click the button to update if a new version is available.



Click **Other Settings** to enter the following interface. Click × to exit the setting.

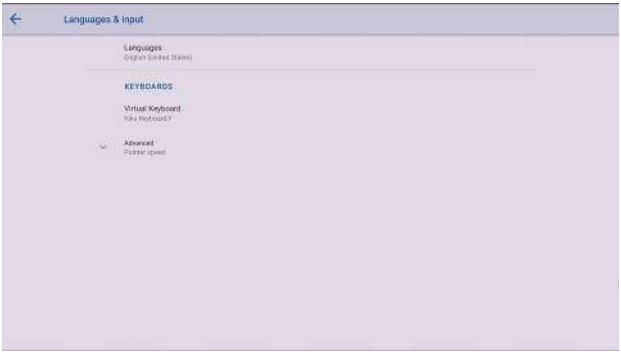
◆Network

Select **Network** to enter the network setting interface. You can view network status information, set **Wi-Fi**, **Ethernet**, **Hotspot & tethering** and **Proxy**. Press ↩ button on remote control to return to the upper interface.

- **Wi-Fi**:Click the corresponding button to enable the Wi-Fi function.
- **Ethernet**: When the RJ45 port is properly connected to the network cable, click the corresponding button to enable the Ethernet function. The user can customize settings to automatically obtain an IP address of the LAN or set a static IP address as needed.
- **Proxy**: Click the item to view proxy server.
- **Hotspot & tethering**: The user can customize relevant settings for portable Wi-Fi hotspot.
- **Network info**: Click to view network status and operation time.
- **Wake on LAN**: Click the corresponding button to enable **Wake on LAN** function.

◆Language

Select **Language** to enter the setting interface of language. You can set **Language**, **Virtual Keyboard** and **pointer speed** in this interface. Press ↩ button on remote control to return to the upper interface.



◆Date&Time

Select **Date &Time** to enter the setting interface. You can set **date & time**, **select time zone**, **hour format** and **date format** in this interface. Press ↩ button on remote control to return to the upper interface.

◆Input and Output

Select **Input** to enter the setting interface of input. You can set **Starting Source**, **New Input Source**, **input EDID**, **CEC Power On** and **CEC Power Off** in this interface. Press ↩ button on remote control to return to the upper interface.

- **Starting Source**: Set the signal source entered after power on.
- **New input source**: After the function is enabled, the system can automatically switch to the screen of the newly connected signal source.
- **Input EDID**: Set the input EDID to 1.4 or 2.0.
- **CEC Power On**: After the **CEC power on** function is enabled and the screen is connected with the CEC device via the HDMI port, the screen automatically starts if the CEC device starts and the screen receives a CEC power on command.
- **CEC Power Off**: After the **CEC power off** function is enabled and the screen is

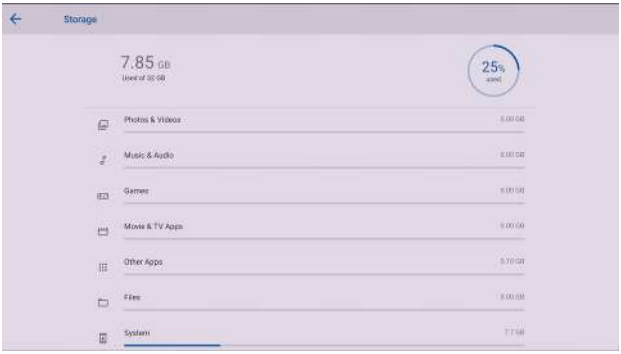
connected with the CEC device via the HDMI port, the CEC device automatically stops if the screen stops and the CEC device receives a CEC power off command.

◆Gadgets

Select **Gadgets** to view downloaded applications, click an app icon to open, disable and force stop the applications.

◆Storage

Select the **Storage** submenu to view the storage and space distribution of Built-in storage, USB flash drive and SD card.



◆Update

Select the **update** submenu to update the system if a new version is available.

◆About

Enter **About** to erase all data and check the system info such as serial number, system version, firmware version, RAM…etc.

◆Power

Select **Power** to enter the setting interface of power option. You can set **automatic power on/off time**, **Sleep mode**, **Energy Saving**, **Eye protection brightness control mode** in this interface. Press ↩ button on remote control to return to the upper interface.

- **Auto power on**: Click the button to enable the function, users can set the time of power on. Set the power on time, display will automatic power on at a customize time.
- **Auto power off**: Click the button to enable the function, users can set the power off on time. Set the power off time, system will automatic power off at a customize time.
- **Sleep mode setting**: Click the button to enable the function, short press the power button to enter the sleep mode instead of shut down.
- **Energy saving**: Set a duration after which the display enters the sleep mode or shut down if the display is left un-operated.
- **Eye protection brightness control mode**: Click the button to enable the function, system will change screen brightness based on ambient light.

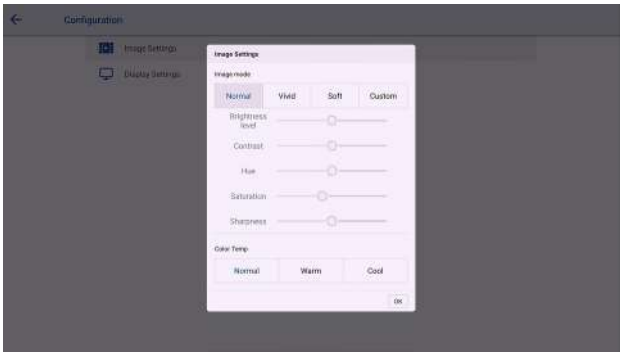
◆Configuration

Select **Configuration** to enter the setting interface of configuration. You can do the **Image settings** and **Display settings** in this interface. Press ↩ button on remote control to return to the upper interface.

Image settings

Image mode: Click the icon to select the image mode, option included **Normal**, **Vivid**, **Soft** and **Custom**. Settings of Image mode is displayed under the signal source.

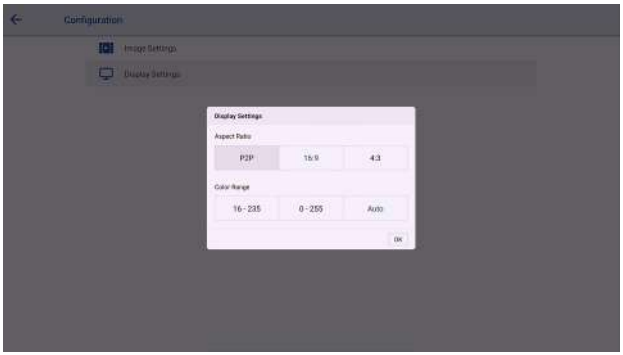
Color Temp: Click the icon to select the color temp, option included **Normal**, **Warm**, **Cool**. Settings of color temp is displayed on Android system.



Display Settings

Aspect Ratio: Click the icon to select the aspect ratio, option included **P2P, 16:9, 4:3**.

Color Range: Click the icon to select the color range, option included **16-235, 0-255, Auto**.



◆Home setting

Select **Home setting** to enter the setting interface of input. You can set **wallpaper**, **Logo**, **Menu settings** in this interface. Press ↩ button on remote control to return to the upper interface.

Wallpaper: Click the icon to customize the wallpaper.

Logo: Click the icon to customize the logo.

Menu settings: Click the icon to display or hide menu on welcome screen.

5 D. Mode and Sound Only

D. Mode

CAUTION

- Please switch off the display when it is not used and enable the function of sound 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.

Press **D.MODE** on the remote control to enter the **D. Mode (Standard – Eco – Custom -Auto)**. Hold the button to switch between the four modes.

- In the **Standard** mode, the screen brightness keeps the same.
- In the **Eco** mode, the screen brightness is reduced 60%.
- In the **Custom** mode, the screen brightness is reduced 20%, (Support manual adjustment, the device will memory the brightness after adjustment).
- In the **Auto** mode, the screen brightness is reduced 20%, (If the eye protection brightness control mode is turned on, it will change automatically according to the ambient light).

Sound Only

Press **Sound Only** on the remote control to enter sound only mode, at this time the screen is off, the system still continues to run. Press any key on the remote control to exit sound only.

6 Serial Port Control

Connect RS-232 port to the PC or controlling device 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 controller:

Function	Controlling Codes	Return codes
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
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 front / 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 rear 1 / HDMI 2	7F 08 99 A2 B3 C4 02 FF 01 52 CF	7F 09 99 A2 B3 C4 02 FF 01 52 01 CF
HDMI rear 2 / HDMI 3	7F 08 99 A2 B3 C4 02 FF 01 53 CF	7F 09 99 A2 B3 C4 02 FF 01 53 01 CF
USB-C (Rear)	7F 08 99 A2 B3 C4 02 FF 01 55 CF	7F 09 99 A2 B3 C4 02 FF 01 55 01 CF
Internal PC	7F 08 99 A2 B3 C4 02 FF 01 38 CF	7F 09 99 A2 B3 C4 02 FF 01 38 01 CF
DP	7F 08 99 A2 B3 C4 02 FF 01 56 CF	7F 09 99 A2 B3 C4 02 FF 01 56 01 CF
Page up	7F 08 99 A2 B3 C4 02 FF 01 13 CF	7F 09 99 A2 B3 C4 02 FF 01 13 01 CF
Page down	7F 08 99 A2 B3 C4 02 FF 01 14 CF	7F 09 99 A2 B3 C4 02 FF 01 14 01 CF
VOL -	7F 08 99 A2 B3 C4 02 FF 01 17 CF	7F 09 99 A2 B3 C4 02 FF 01 17 01 CF

VOL +	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
Home page	7F 08 99 A2 B3 C4 02 FF 01 1C CF	7F 09 99 A2 B3 C4 02 FF 01 1C 01 CF
Return (exit)	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
Set volume	7F 08 99 A2 B3 C4 02 FF 05 XX CF	7F 09 99 A2 B3 C4 02 FF 01 2B 01 CF NOTE: XX indicates the value of volume (0- 100), corresponding to the hexadecimal number system (00 - 64).
Query the firmware version number	7F 08 99 A2 B3 C4 02 FF 01 3D CF	7F 09 99 A2 B3 C4 02 FF 01 3D XX CF Note: XX indicates version (20211110183518)
Set display mode	7F 08 99 A2 B3 C4 02 FF 06 XX CF	7F 09 99 A2 B3 C4 02 FF 06 XX 01 CF NOTE: XX indicates the mode. 00-standard, 01-ECO mode, 02-custom□03-auto
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
Set the value of 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 NOTE: XX indicates the value of backlight brightness (1- 100), corresponding to the hexadecimal number system (01- 64).
Switch backlight	7F 08 99 A2 B3 C4 02 FF 01 15 CF	7F 09 99 A2 B3 C4 02 FF 01 15 XX CF NOTE: ● XX = 01 indicates the backlight is on. ● XX = 00 indicates the backlight is off.
Settings	7F 08 99 A2 B3 C4 02 FF 01 20 CF	7F 09 99 A2 B3 C4 02 FF 01 20 01 CF
Freeze ON/ OFF toggle	7F 08 99 A2 B3 C4 02 FF 01 3B CF	7F 09 99 A2 B3 C4 02 FF 01 3B 01 CF
Freeze On	7F 09 99 A2 B3 C4 02 FF 0B 00 CF	7F 09 99 A2 B3 C4 02 FF 0B 00 01 CF
Freeze Off	7F 09 99 A2 B3 C4 02 FF 0B 01 CF	7F 09 99 A2 B3 C4 02 FF 0B 01 01 CF
Mute On	7F 09 99 A2 B3 C4 02 FF 0F 00 CF	7F 09 99 A2 B3 C4 02 FF 0F 00 01 CF
Mute Off	7F 09 99 A2 B3 C4 02 FF 0F 01 CF	7F 09 99 A2 B3 C4 02 FF 0F 01 01 CF
Switch Backlight On	7F 09 99 A2 B3 C4 02 FF 0E 01 CF	7F 09 99 A2 B3 C4 02 FF 0E 01 01 CF
Switch Backlight Off	7F 09 99 A2 B3 C4 02 FF 0E 00 CF	7F 09 99 A2 B3 C4 02 FF 0E 00 01 CF

Function	Querying codes	Return codes	Note
Power supply	7F 08 99 A2 B3 C4 02 FF 01 37 CF	7F 09 99 A2 B3 C4 02 FF 01 37 XX CF	● XX indicates the power on/off state. ● XX = 01: power on state ● XX = 00: power off state
Current signal source	7F 08 99 A2 B3 C4 02 FF 01 50 CF	7F 09 99 A2 B3 C4 02 FF 01 50 XX CF	● Smart system = 30 ● PC = 17 ● SDM = 18 ● DP = 20 ● HDMI Front (1) = 19 ● HDMI Rear 1 (2) = 1F ● HDMI Rear 2 (3) = 1E ● VGA/USB-C Front = 00 ● USB-C Rear = 01
D.Mode	7F 08 99 A2 B3 C4 02 FF 01 35 CF	7F 09 99 A2 B3 C4 02 FF 01 35 XX CF	XX indicates the mode. 00-standard, 01-ECO mode,02-custom 03-auto
Backlight brightness	7F 08 99 A2 B3 C4 02 FF 01 49 CF	7F 09 99 A2 B3 C4 02 FF 01 49 XX CF	XX indicates the value of backlight brightness (1 - 100), corresponding to the hexadecimal number system (01 - 64).
Backlight status	7F 08 99 A2 B3 C4 02 FF 01 81 CF	7F 09 99 A2 B3 C4 02 FF 01 81 XX CF	● XX = 00 indicates the backlight is on. ● XX = 01 indicates the backlight is off.
Return to system state of the previous options	7F 08 99 A2 B3 C4 02 FF 0A 00 CF	7F 08 99 A2 B3 C4 02 FF 0A 00 AB CD EF GH IJ OP QR ST UV CF	● AB: Power supply ● CD: Speaker ● EF: Current signal source ● GH: Speaker volume ● IJ: D.Mode ● OP: backlight brightness ● QR: backlight state ● ST: Whiteboard state ● UV: Screen lock state

7 Formats Supported by Multi-media

Media category	Formats
Photo	JPEG, BMP, PNG.
Video	.mkv/.wmv/.avi/.mp4/.mpg/.mpeg/.mov/.dat/.iso
Audio	.mp3/.wma/.m4a/.mp4/.aac

8 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 your local distributor for help. For your safety, please do not repair the unit on your own.

Failure	Solution
No image.	• Check whether the power plug is inserted into the power outlet and whether the display is powered on. • Check whether the video and audio input cables are connected correctly. • Check to ensure the correct source is selected. • Check the settings on image brightness and contrast.
Image is normal, but no sound.	• Check the volume. • Check whether the **MUTE** button on the remote controller is pressed.
The image is black and white.	• Modify the color settings. • Check the color settings.
Image or sound is interrupted.	• Turn off other devices surrounding the screen to check again, if any surrounding devices are causing the interference, try moving them away from the screen. • Do not share the same power outlet with other electric appliances that could interference.
The remote controller fails.	• Change the batteries. • Clean the signal emitter at the top of the remote controller. (Check whether it is blocked.) • Check contacts of the batteries.

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 screen. This symptom is not a fault and does not affect running functions of the machine.
- 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 screen and metal back cover. This is a normal symptom.

9 Maintenance Tips

- Do not install or place the machine near the heat source.
- Do not install or place the machine under directly sunlight, or dust /damp place.
- Do not install or place the machine in the places with mechanical vibration and vulnerable to impact.
- Please keep the machine stay away from grid, large metal objects, radar stations and other equipment.
- Do not use chemical reagents to wipe the machine body, solvent may cause deterioration or damage to the shell paint. If have dirt bilge, wipe it with drying warm cloth after cutting off power source. Display touch screen can be wiped gently with a clean soft cloth.
- Do not power on and off the machine frequently, so as not to affect the service life of the machine. After normal shutdown, please wait three minutes before starting up. If not in use for a long time, please turn off the power and unplug the machine.
- Do not set the display brightness and contrast to the maximum for a long time to extend the service life of the screen.
- Do not use hard objects to write on the touch screen, so as not to scratch the screen and affect the display effect.

10 Technical Parameters

Model	TT-5523NT	TT-6523NT	TT-7523NT	TT-8623NT	TT-9823NT
Display					
Active Screen Size	55"	65"	75"	86"	98"
Backlight	LED	LED	LED	LED	LED
Display Area(Decimal point is rounded off)	1210 x 681mm	1429 x 804 mm	1651 x 929mm	1896 x 1066mm	2159 x 1214mm
Display Ratio	16:9	16:9	16:9	16:9	16:9
Resolution	4K (3840x2160)	4K (3840x2160)	4K (3840x2160)	4K (3840x2160)	4K (3840x2160)
Display Colors	1.07G (8 bit + FRC)	1.07G (8 bit + FRC)	1.07G (8 bit + FRC)	1.07G (8 bit + FRC)	1.07G (8 bit + FRC)
Brightness Center brightness	400 cd/m²	400 cd/m²	400 cd/m²	400 cd/m²	450 cd/m²
Contrast Ratio	Typ. 4000:1	Typ. 5000:1	Typ. 5000:1	Typ. 4000:1	Typ. 1200:1
LCD Response Time	Typ. 8 ms	Typ. 8 ms	Typ. 8 ms	Typ. 8 ms	Typ. 8 ms
LCD Viewing Angle	178°	178°	178°	178°	178°
LCD Refresh Rate	60Hz	60Hz	60Hz	60Hz	60Hz
Lifespan	≥50000 hours	≥50000 hours	≥50000 hours	≥50000 hours	≥50000 hours
Smart System					
Chipset	T982				
CPU	Quad core ARM Cortex-A55 1.5GHz, Max.1.9GHz				
GPU	ARM Mali-G52 MP2 (2EE)				
RAM	4G				
ROM	32G				
Android Version	11				
Wi-Fi Module	Pluggable Wi-Fi module Wi-Fi 5 + Wi-Fi 6 + BT 5.2				
Electrical					

Model	TT-5523NT	TT-6523NT	TT-7523NT	TT-8623NT	TT-9823NT
Working Voltage	AC100-240V Max. 2.5A	AC100-240V Max. 3.0A	AC100-240V Max. 3.0A	AC100-240V Max. 3.5A	AC100-240V Max. 5.5A
Power Consumption (Standard Mode Max.)	250W	300W	300W	350W	550W
Power Consumption (Standby mode)	<0.5W	<0.5W	<0.5W	<0.5W	<0.5W
Speaker					
Speaker Direction	Downward	Downward			
Rated Impedance	6Ω	6Ω			
Avg. Power Output	10Wx2	15W x 2			
Max. Power Output	15Wx2	20W x 2			
Ports					
Rear input port	Type A USB 2.0 x 3, HDMI IN x 2, HDMI IN(ARC) x 1, LAN IN x 1, RS232 x 1, Type C(USB 2.0/4K 60Hz/PD15w) x 1, DP x 1				
Rear output port	HDMI OUT x 1, LAN OUT x1, S/PDIF OUT x 1, LINE OUT(3.5mm) x 1				
Transportation/Storage/Installation					
Outline Dimension (without wall mount bracket thickness)	1260 x 731 x 71 mm	1479 x 854 x 92 mm	1701 x 979 x 94 mm	1946 x 1116 x 94 mm	2213 x 1293 x 88 mm
Packing Dimension	1378 x 185 x 840 mm	1604 x 207 x 977 mm	1819 x 227 x 1095 mm	2075 x 250 x 1230 mm	2370 x 1484 x 356 mm
Net Weight	18±2kg	24±2kg	33±2kg	42±2kg	73±2kg
Gross Weight	25±2kg	34±2kg	46±2kg	59±2kg	93±2kg
VESA Mount Installation Position (Transversal)	400 x 400 mm	600 x 400 mm	800 x 400 mm	800 x 400 mm	800 x 600 mm
Storage Temperature/ Humidity	15˚C ~ 45˚C / 20 ~ 90%RH (Non coagulation)				
Working Temperature/ Humidity	0˚C ~ 40˚C / 20 ~ 80%RH (Non coagulation)				
Installation Method (Optional)	wall-mounted, mobile cart				

11 More Information

For More Information

Please visit our website (www.newline-interactive.com) for detailed instruction manual.

Contact Us for Support

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

Our company is devoted to machine innovation and technology enhancement. Therefore, we may change machine specs and information without notice, Machine pictures in the manual are for reference only, please refer to actual machines.

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