



# NovoTouch

## User Manual

(For EK653i / EK753i / EK863i)

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# Safety

## Placement

- Do not place the unit on an unstable cart, stand, tripod, bracket, table, or shelf.
- Do not expose the unit to direct sunlight and other sources of heat.
- Do not put the unit near appliances that generate magnetic fields.
- Do not put any liquid near or on the unit, make sure you do not spill any liquid inside the unit.
- Do not put heavy objects on top of the unit.

## Power Supply

- Check that the unit's operating voltage is identical to your local power supply.
- Please unplug the display from the power supply during possible thunder-storms or lightning.
- Please unplug the display from the power supply when the unit will be idle for a long time.
- Please prevent the power cable from receiving physical or mechanical damage.
- Please use the original power cable from the product packaging, and don't modify or lengthen it.
- Please check and ensure that the AC source is connected with the ground.
- The power cable that comes with the display is for use exclusively by this device.

## LED Screen

- This display only supports landscape display orientation. Do not mount in portrait display orientation or mount facing up or facing down.
- Never use any hard or sharp object in place of the styluses.
- Do not use permanent or dry-erase markers on the screen. If dry-erase markers are used on the screen, remove the ink as soon as possible with a lint-free, non-abrasive cloth.
- Unplug the power cable before cleaning.
- For a longer panel lifetime and better display performance, do not set the display to high brightness for a long period of time.

## Temperature

- Do not place the unit near or over a radiator or a heater.
- If your display is suddenly moved from a cold to a warm place, please unplug the power cable and do not turn it on at least 2 hours, making sure the moisture inside the unit is all evaporated.
- Normal operating temperature is 0 - 40°C.

## Humidity

- Do not expose the unit to rain, or place in a high humidity area.
- Please make sure indoor environment is dry and cool.
- Normal operating humidity is 10% - 90%.

## Ventilation

- Please put the unit in a well ventilated place, so the heating can be released easily.
- Ensure that the unit has enough space for ventilation. Space requirement: left, right and back >10cm, top > 20cm.

## Earphone

- Using the earphones to listen to loud audio for an extended period of time might affect one's hearing.
- Before using earphones, please turn down the volume in advance.

## Battery

- Please make sure the battery is properly disposed or recycled after use.
- Please keep the battery away from children.
- DO NOT throw the battery into a fire.
- For the remote control batteries, ensure that the correct batteries are used and installed in the proper orientation.

## Maintenance

- This machine should only be maintained/serviced by certified technician.
- Inspect the display mount frequently to ensure that it has remained securely installed.
- Check the mounting location for loose screws, gaps, distortions, signs of damage or weakness that can occur over time.

## Disposal of Old Electric and Electronic Equipment



The symbol on your product or the package represents that the product should not be treated as the normal household waste when discarded but should be carried to the recycling location of the waste electric and electronic equipment. The consequence on the environment and human health due to the incorrect disposal of the product can be prevented if it can be ensured that the product is properly discarded. Material recycling is helpful to the protection of natural resources. The symbol is only valid in European Union. If you want to discard electrical and electronic equipment, contact the governmental authorities or your dealer for the correct method of disposal.

## Important Recycling Instructions

The product may contain other electronic wastes and may pose risk if not discarded properly. Abide by the local, state/provincial or federal laws of recycling or discarding. For more information, please visit the website and contact Electronic Industries Alliance (EIA) on [WWW.EIAE.ORG](http://WWW.EIAE.ORG).

## Regulatory Compliance

### FCC Warning

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

Changes or modifications not expressly approved by the parties responsible for compliance could void the user's authority to operate the equipment.

### Federal Communications Commission (FCC) Notice (U.S. Only)



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.

### Canada

This class A digital apparatus complies with Canadian ICES-003.

### CE Declaration of Conformity

This device complies with the requirements set out in the Council Directive on the Approximation of the Laws of the Member States relating to Electromagnetic Compatibility (2014/30/EU), Low-voltage Directive (2014/35/EU) and RoHS directive (2011/65/EU).

This product has been tested and found to comply with the harmonized standards for Information Technology Equipment, these harmonized standards published under Directives of Official Journal of the European Union.

**WARNING:** This equipment is compliant with Class A of EN55032/CISPR 32. In a residential environment this equipment may cause radio interference.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

## Safety Certifications

FCC-A, cTUVus, CE, CB, EAC, RoHS

## Disposal and Recycling

This product may contain other electronic waste that can be hazardous if not disposed of properly. Recycle or dispose in accordance with local, state, or federal Laws. For more information, contact the Electronic Industries Alliance at [www.eiae.org](http://www.eiae.org).

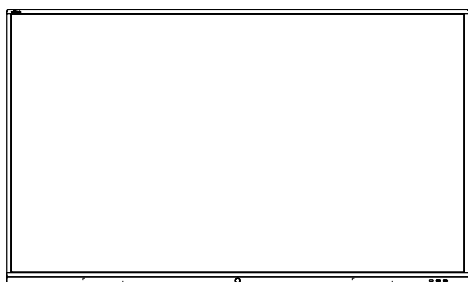
## EPA ENERGY STAR Compliance



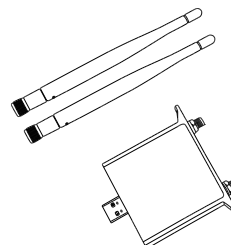
This device is marked with the ENERGY STAR logo and thus complies with the requirements of the U.S. Environmental Protection Agency (EPA)'s ENERGY STAR program. As an ENERGY STAR partner in good standing, Vivitek (A brand of Delta) indicates that this device meets the strict ENERGY STAR guidelines for energy efficiency. For additional information on ENERGY STAR, please refer to <https://www.energystar.gov/>.

# Package Contents

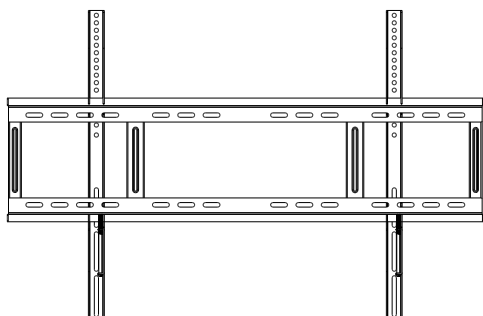
Ensure that all of the proper items are included with the display in the packaging. The items that should be included in the packaging are:



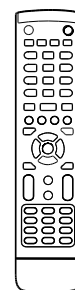
**NovoTouch**



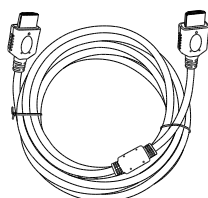
**Wi-Fi USB Module (with Antennas)**



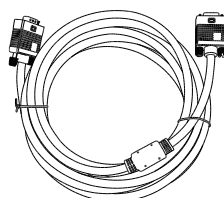
**Wall Mount Kit**



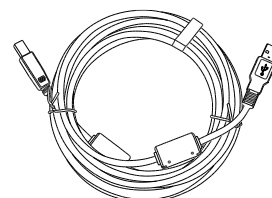
**Remote Control**



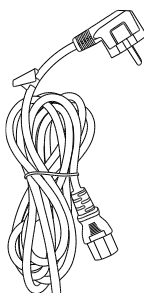
**HDMI Cable**



**VGA Cable**



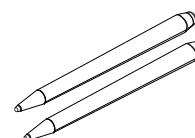
**USB Cable**



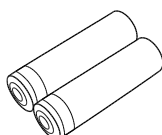
**Power Cable**



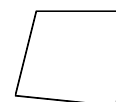
**Audio Cable**



**Stylus x 2**



**Batteries x 2**



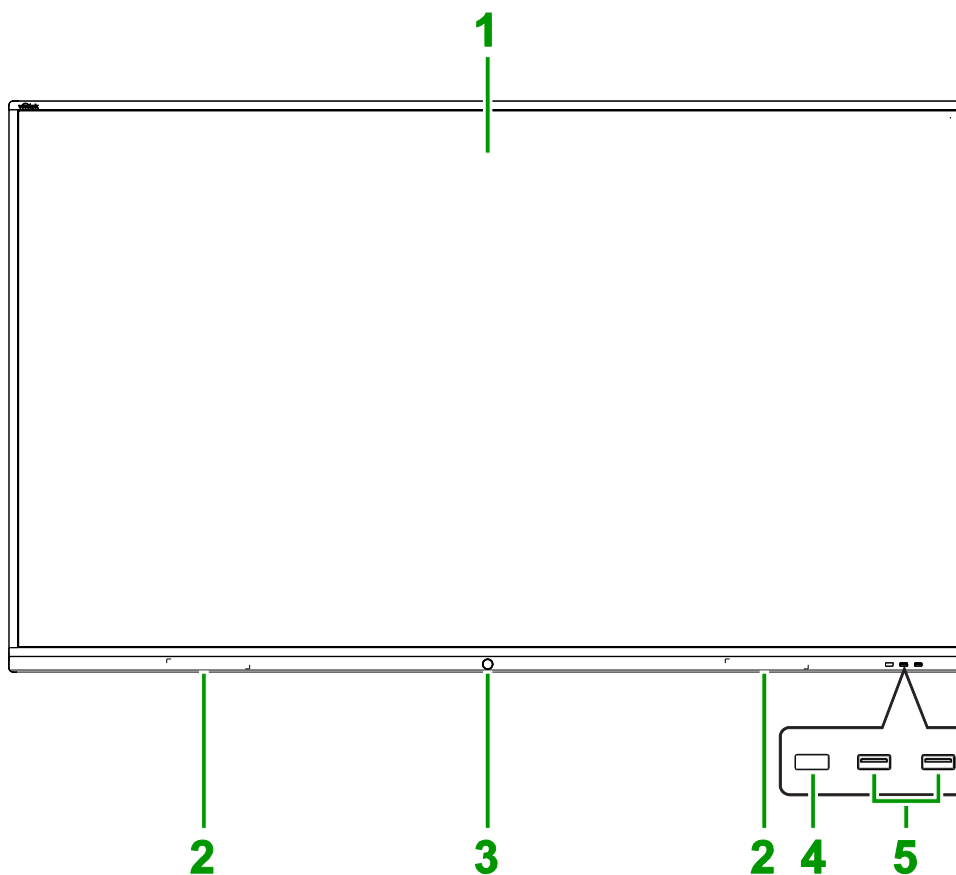
**Quick Start Guide**



# Overview

## Display Front View

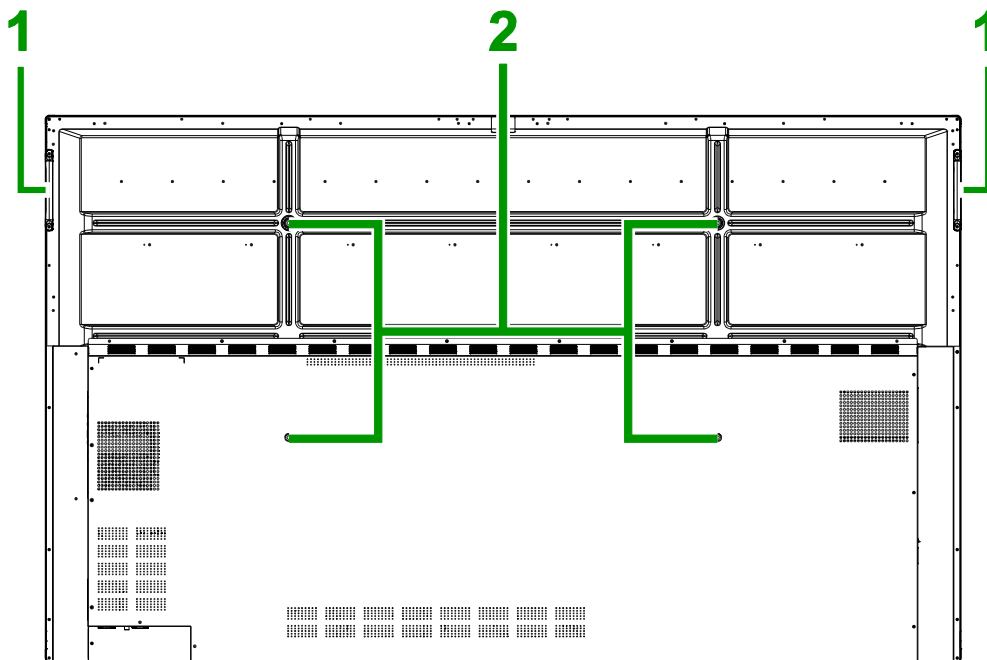
The following illustration shows the front side of the display and its various components:



No.	Item	Description
1	Touchscreen	<ul style="list-style-type: none"> <li>Use touch gestures to navigate the display's user interface.</li> <li>Tap to wake the display when it is in standby mode (the screen is off but the display is on).</li> </ul>
2	Magnetic Stylus Holder	Holds the styluses included with the display.
3	Power Button and Status Indicator LED	<p><u>Power Button</u></p> <ul style="list-style-type: none"> <li>[When display is off]: Press to power on the display.</li> <li>[When display is on]: Press to place the display on energy-saving mode. Press and hold for 2 seconds to place the display in standby mode.</li> </ul> <p><u>Status Indicator LED</u></p> <ul style="list-style-type: none"> <li><b>Solid Blue:</b> The display is powered on.</li> <li><b>Red:</b> The display is in standby mode.</li> <li><b>Off:</b> The display is not connected to a power source.</li> <li><b>Flashing Red/Blue:</b> The display is in energy-saving mode</li> </ul>
4	Remote Control IR Sensor	Receives the signal from the display's remote control with a range of up to 8 meters.
5	USB 2.0 Ports	Connects to a USB flash drive to view media files or to a mouse/keyboard.

## Display Rear View

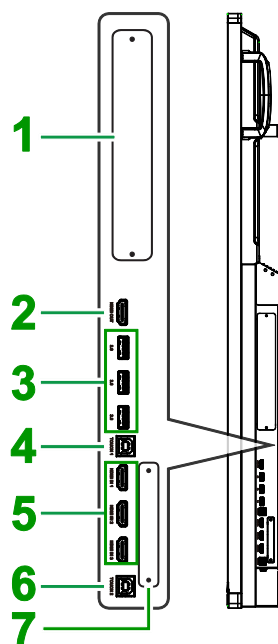
The following illustration shows the rear of the display and its various components:



No.	Item	Description
1	Handles	Allows you to safely carry/move the display.
2	Wall Mount Screw Holes	Used to install the wall mount included with the display. See the “ <a href="#">Installing the Wall Mount</a> ” section for more information.

## Display Right View

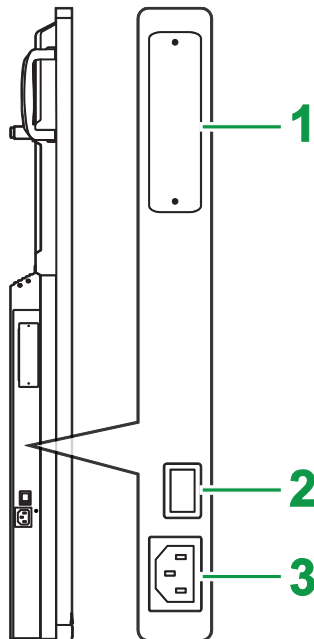
The following illustration shows the right side of the display and its various components:



No.	Item	Description
1	80-Pin OPS Slot	Remove the cover to install a standard Intel 80-pin OPS module to the display.
2	HDMI Out Port	Connects to either a second display or projector to duplicate or extend the video shown on the display.
3	USB 3.0 Ports	Connects to a USB flash drive to view media files or to a mouse/keyboard.
4	Touch (USB-B) Port 1	Connects to the computer connected to the HDMI input port 1 to allow the touchscreen to control the computer's interface.
5	HDMI In Port 1 / 2 / 3 (2.0)	Connects to Blu-Ray/DVD players, set-top boxes, digital media players, computers, or other video sources to broadcast video and audio.
6	Touch (USB-B) Port 2	Connects to the computer connected to the HDMI input port 2 to allow the touchscreen to control the computer's interface.
7	Wi-Fi Module Slot	Remove the cover to install the Wi-Fi included with the display. See the <i>"Installing the Wi-Fi Module"</i> section for more information.

## Display Left View

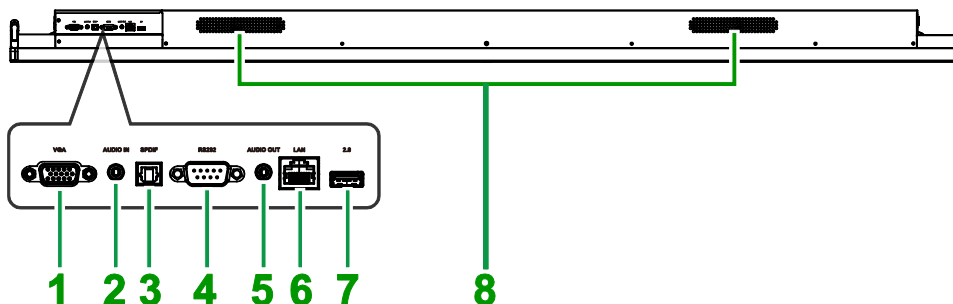
The following illustration shows the left side of the display and its various components:



No.	Item	Description
1	120-Pin OPS Slot	Remove the cover to install a 120-pin OPS module to the display.
2	Power Switch	Activates the display once it is connected to a power source.
3	Power Socket	Connects to a power outlet.

## Display Bottom View

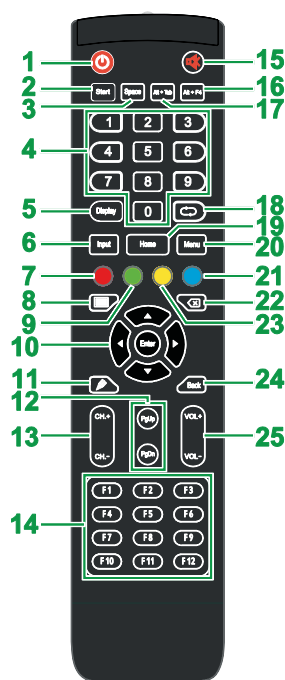
The following illustration shows the bottom of the display and its various components:



No.	Item	Description
1	VGA In Port	Connects to a computer to broadcast video.
2	Audio In Jack	Connects to the video source to broadcast its audio.
3	SPDIF Port	Connects to external speakers to broadcast audio.
4	RS-232 Port	Connects to a computers or servers for control commands. See the " <a href="#">Appendix (RS-232 Specifications)</a> " section for more information.
5	Audio Out Jack	Connects to external speakers to broadcast audio.
6	LAN Port	Connects to a router for internet access.
7	USB 2.0 Port	Connects to a USB flash drive to view media files or to a mouse/keyboard.
8	Speakers	Broadcasts the display's audio.

## Remote Control

The following illustration shows the display's remote control and its buttons:



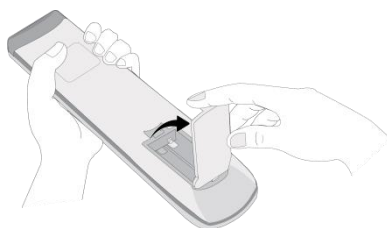
No.	Button	Description
1	Power	Turns the display on or off.
2	Start*	Performs the same action as the Windows key on a PC keyboard.
3	Spacebar*	Performs the same action as the spacebar on a PC keyboard.
4	Numeric Keypad	Numeric input buttons.
5	Display Information	Displays the current channel/input information.
6	Input Source	Opens the input source menu.
7	Lock/Unlock Display Buttons and Touchscreen	Disables/Enables both the buttons located on the front of the display and the display's touchscreen.
8	Blank Screen	Makes the screen display a monochromatic screen.
9	Lock/Unlock	Disables/Enables the buttons located on the front of the display.
10	Navigation Buttons	Navigates between various applications and menus shown on screen.
11	Quick Draw	Launches the displays drawing tools. See the Tools section for more information.
12	Page Up/Down*	Performs the same action as the Page Up/Down buttons on a PC keyboard.
13	Function Buttons	Functional buttons.
14	F1 - F12*	Performs the same action as the F1 - F12 keys on a PC keyboard.
15	Mute	Disables the display's audio.
16	Alt+F4 (Close Window)*	Performs the same action as the Alt+F4 key combination on a PC keyboard.
17	Alt+Tab (Switch Window)*	Performs the same action as the Alt+Tab key combination on a PC keyboard.
18	Function Button	Functional button.
19	Home Screen	Returns the display to the home screen.
20	Settings Menu	Opens the OSD settings menu.
21	Freeze Screen	Freezes the screen.
22	Backspace	Deletes the entered text.
23	Lock/Unlock Touchscreen	Disables/Enables the display's touchscreen and prevents touch gestures from working.
24	Back	Returns to the previous screen.
25	Volume +/-	Adjusts the display's audio level.

\*Only functional when an OPS unit running Windows is installed into the display.

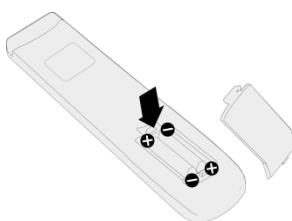
## Installing Batteries

Before using the display's remote control you must first install the two AAA batteries included with the display.

1. Open the battery compartment cover on the remote control.

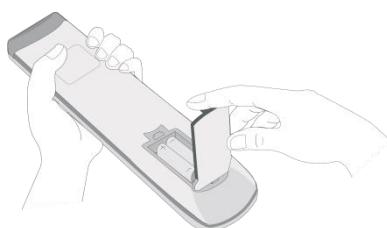


2. Insert the batteries ensuring that the + and - terminals on the battery match their corresponding terminals in the battery compartment.



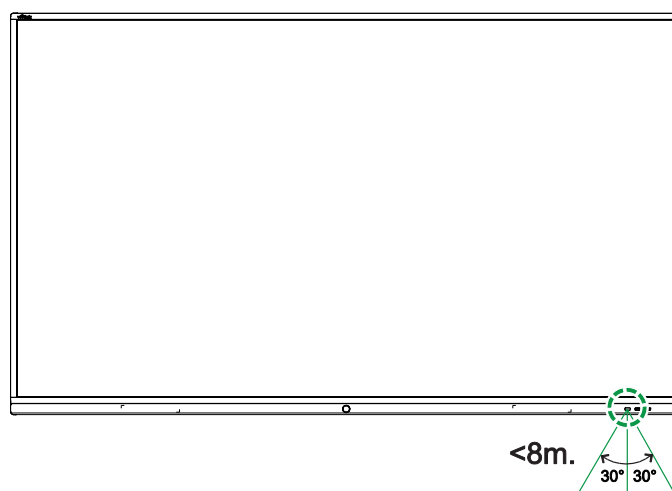
**! WARNING:** Failure to install the correct batteries in the correct orientation may result in damage or possibly injury.

3. Replace the battery compartment cover on the remote control.



## Remote Control Usage

When using the remote control ensure that the remote control is pointed at the IR sensor at the front of the display within a range of 8 meters distance and 30-degrees to the left and right of the IR sensor.



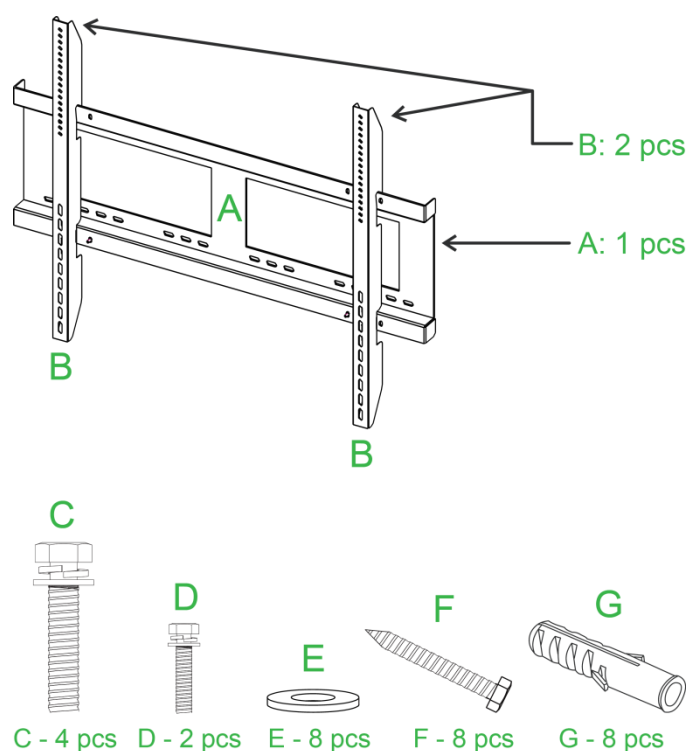
# Installing the Wall Mount

Before installing the wall mount ensure the following:

- Installation should only be done by a certified professional.
- Maximum wall mount kit load capacity: 150kg (330lbs).
- Use M8x25mm screws to install the wall mount bracket to the display.
- When setting the display down to install the wall mount, place it face down on a flat and stable surface covered by a protective sheet or cloth and a table cushion as shown in the illustration provided. DO NOT place the display on an uncovered surface.



- Ensure that all the following parts are included in the wall mount kit:



Letter	Item	Quantity
A	Wall Mount Frame	1
B	Wall Mount Brackets	2
C	Bracket Screws	4
D	Frame Screws	2
E	Wall Screw Washers	8
F	Wall Screws	8
G	Anchor Screws	8

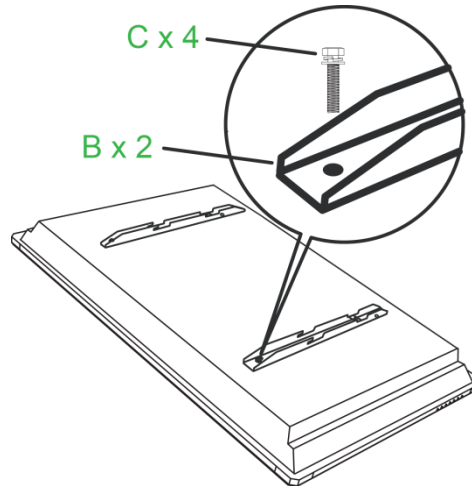


To mount NovoTouch onto a wall follow the instructions below:

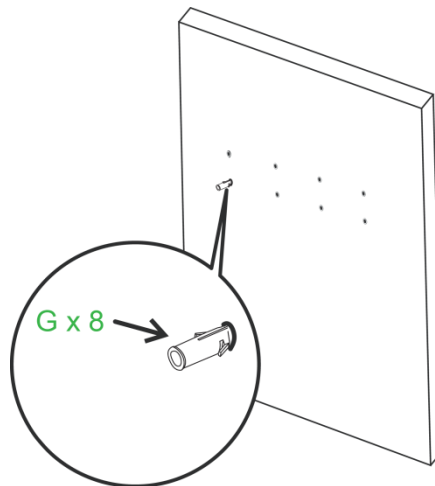
**NOTE:** This display only supports landscape display orientation. Do not mount in portrait display orientation or mount facing up or facing down.

1. Install the two (B) the wall mount brackets onto the display using the four (C) bracket screws.

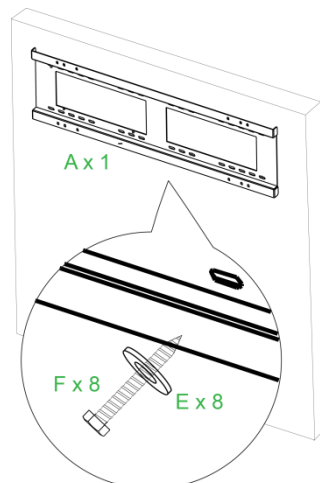
**NOTE:** Use M8x25mm screws to install the wall mount bracket to the display.



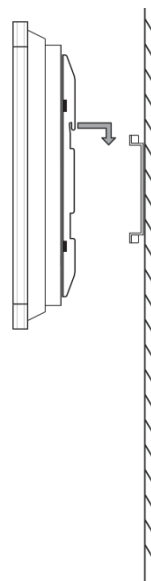
2. Install the eight (G) anchor screws into the wall you want to mount NovoTouch on.



3. Install the (A) wall mount frame onto the wall by securing the eight (F) wall screws and (E) washers to the anchors.



4. Mount the displays' wall mount brackets onto the wall mount frame.



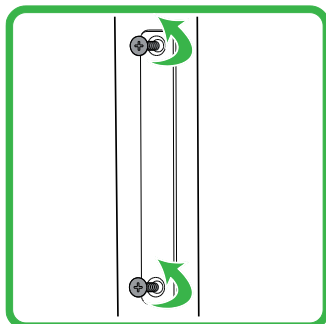
5. Secure the wall mount brackets to the frame using the two (D) frame screws.



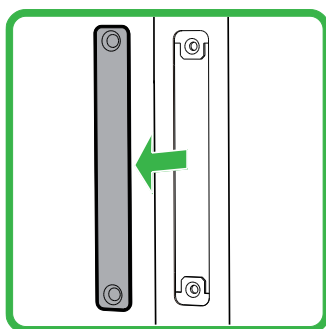
# Installing an OPS Module

NovoTouch features a standard Intel 80-pin OPS slot on its right side and a 120-pin OPS slot on its left side. Before installing an OPS module into any of the slots, first ensure that the module is compatible with the respective slot, and then follow the steps below to install the module:

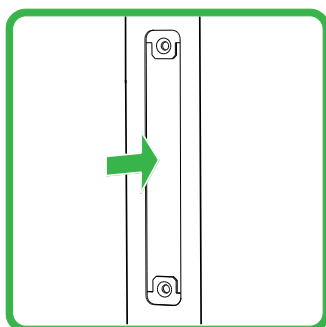
1. Remove the two screws on the OPS slot cover.



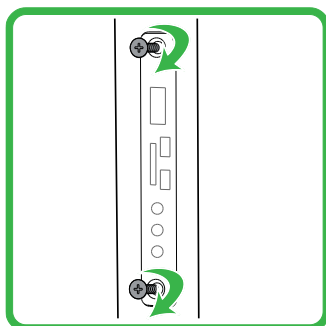
2. Remove the slot cover.



3. Insert the OPS module into the slot.



4. Install the two screws to secure the OPS module to the display.



# Connections

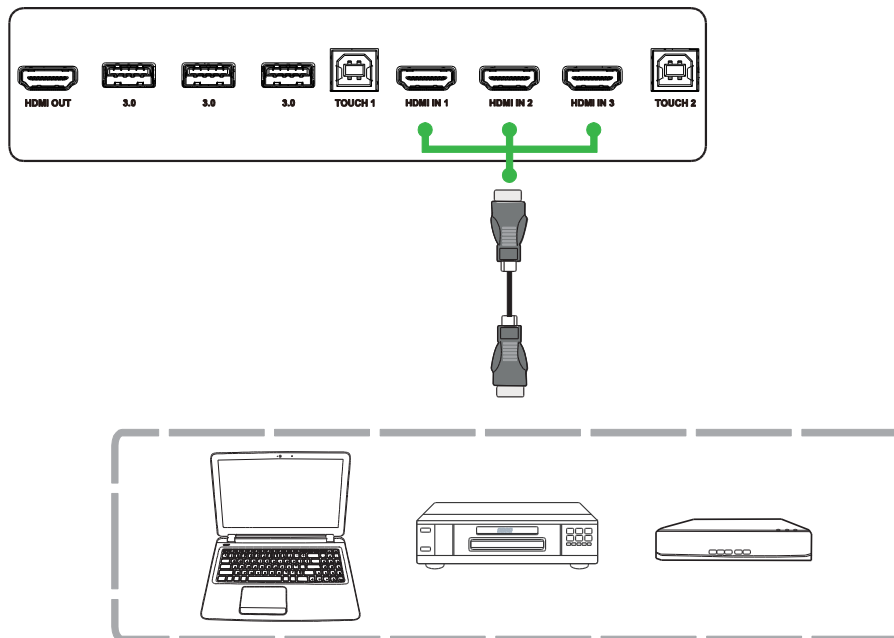
This section describes the connections available for the various ports located on either the right or bottom side of the NovoTouch display.

**NOTE:** *It is suggested that you make any connections prior to powering on the display.*

## HDMI-In

The HDMI-In ports connect to various devices such as Blu-Ray/DVD players, set-top boxes, digital media players, computers, and other sources to broadcast video and audio on the NovoTouch. When connecting a device to the HDMI-In port:

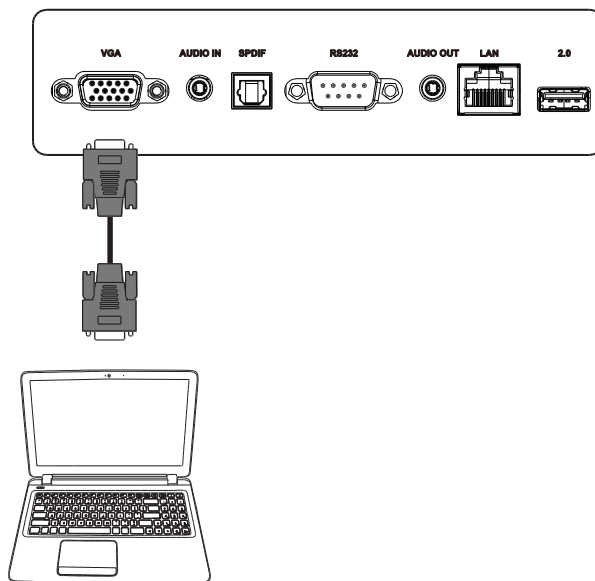
- Use an HDMI cable with a standard Type-A HDMI connector.
- Select the corresponding HDMI input in the input source menu on the NovoTouch. See the Switching Input Source section for more information on selecting input sources.



## VGA-In

The VGA-In port connects to mainly computers to broadcast video on the NovoTouch. When connecting a device to the VGA-In port:

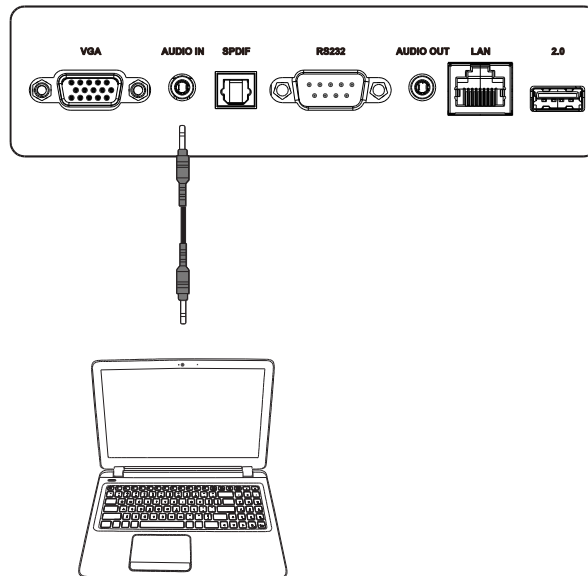
- Use a standard VGA cable.
- Select the corresponding VGA input in the input source menu on the NovoTouch. See the Switching Input Source section for more information on selecting input sources.
- If you want the NovoTouch to also broadcast audio from the connected devices, connect an audio cable from the audio out jack of the source to the audio in jack of the NovoTouch, as described in the Audio-In section below.



## Audio-In

The Audio-In jack is used particularly for connections that feature video-only streams (such as a VGA connection) by connecting to the audio out jack of the video source to broadcast the audio from that source. When connecting a device to the Audio-In port:

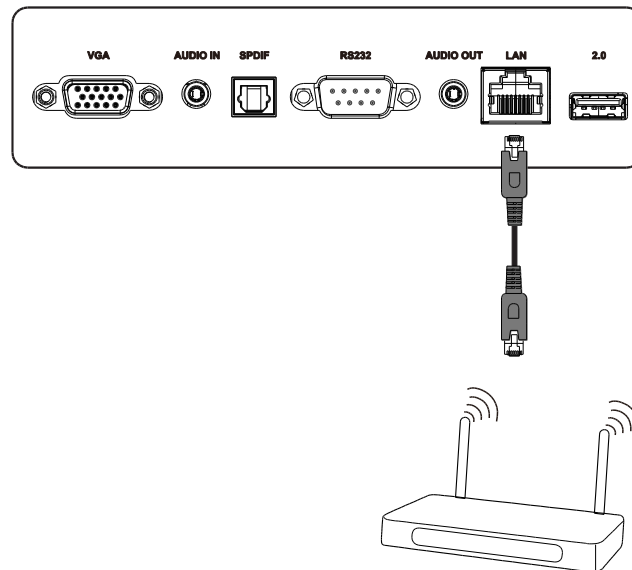
- Use a standard 3.5mm audio cable.



## LAN (RJ-45)

The LAN (RJ-45) port connects to a router or a hub to allow the NovoTouch to access the internet. When connecting a router to the LAN port:

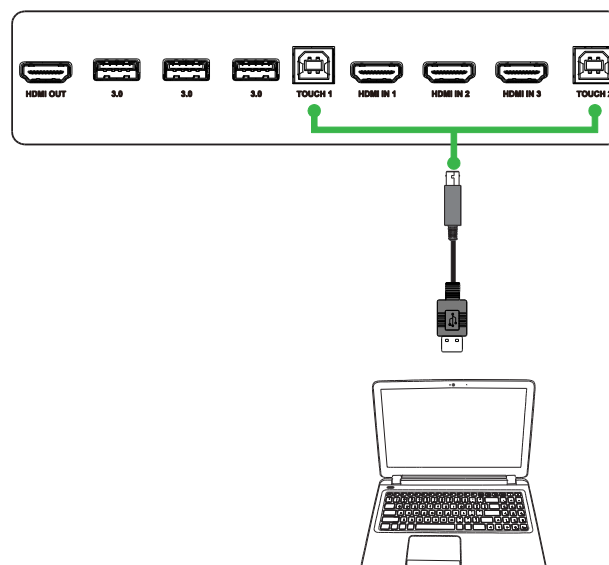
- Use a standard Ethernet cable.



## Touch

The touch port allows you to connect a computer (via any of its USB ports) to the NovoTouch and use the touchscreen on the NovoTouch to control the computer's on-screen interface. When connecting a computer to the touch port:

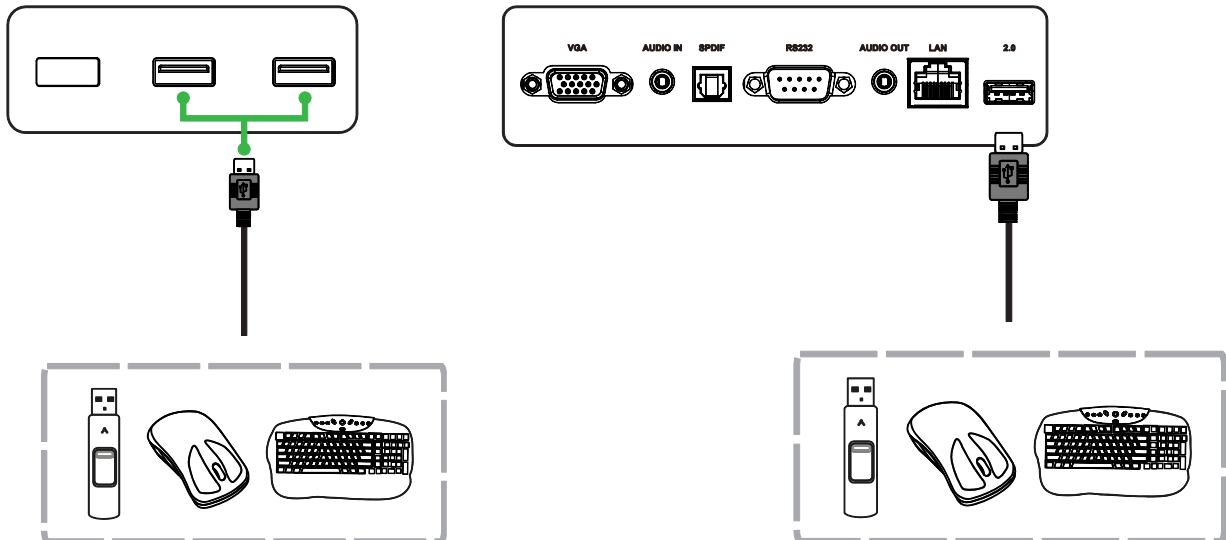
- Use a Type-A to Type-B USB cable.
- Use the Touch 1 port to control a PC connected to the HDMI 1 port, use the Touch 2 port to control a PC connected to the HDMI 2 port.
- Ensure that a video connection for the computer is made and the corresponding input source is selected in the input source menu, so that the touchscreen is able to show the computer's interface.
- Allow the computer to install any necessary drivers.



## USB (2.0 / 3.0)

The USB ports allow you to connect USB flash drives for direct playback of stored media, as well as USB devices such as a mouse or keyboard for easier navigation of the NovoTouch's interface. When connecting a USB flash drive:

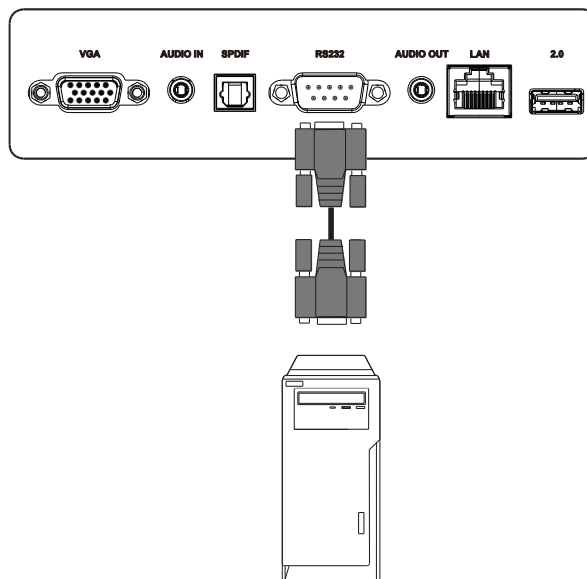
- Launch the Finder app to view the media files stored on the flash drive. See the Finder section for more information.



## RS-232

The AV In port connects to a computer or server to provide data and control signals to the NovoTouch. When connecting a device to the RS-232 port:

- Use a standard RS-232 cable.

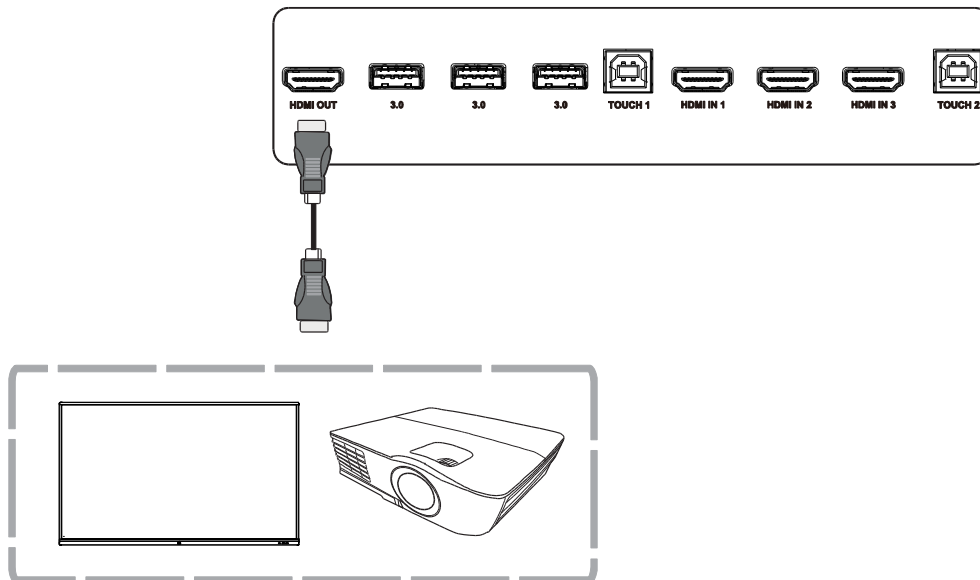




## HDMI-Out

The HDMI-Out port connects to the HDMI in port on other displays or projectors to duplicate or extend the video shown on the NovoTouch on the connected display/projector. When connecting another display device to the HDMI-Out port:

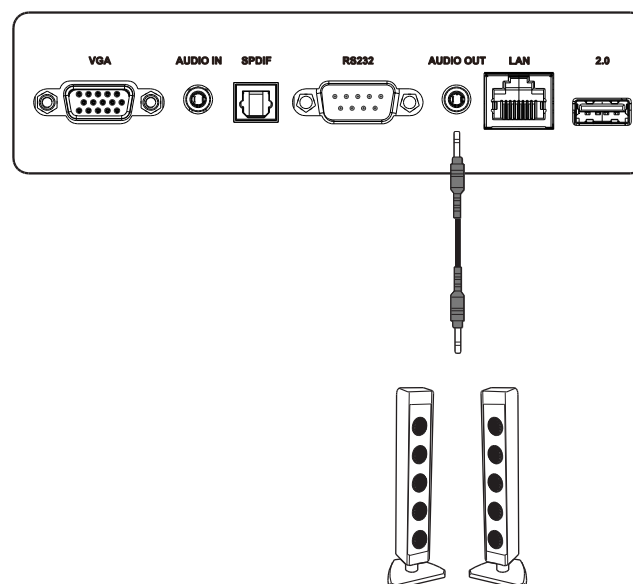
- Use a standard HDMI cable.
- Select the corresponding HDMI input on the second display.



## Audio-Out

The Audio-Out jack connects to external speakers to broadcast the audio from the NovoTouch. When connecting external speakers to the Audio-Out jack:

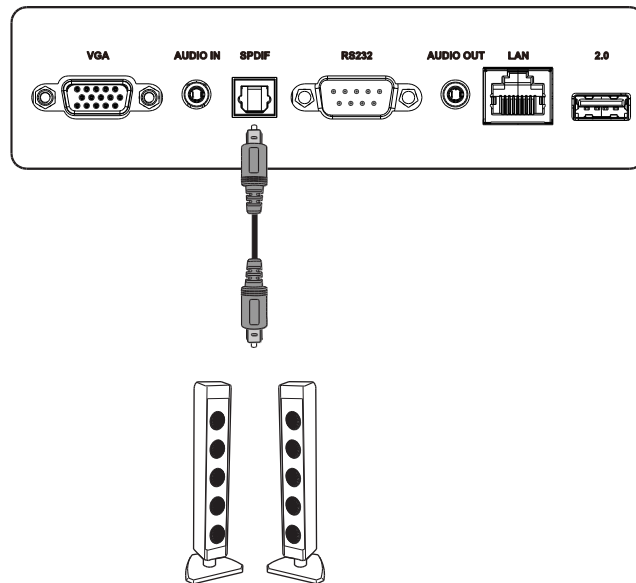
- Use a standard 3.5mm audio cable.



## SPDIF

The SPDIF port connects to external speakers to broadcast the audio from the NovoTouch. When connecting external speakers to the SPDIF port:

- Use a standard SPDIF cable.

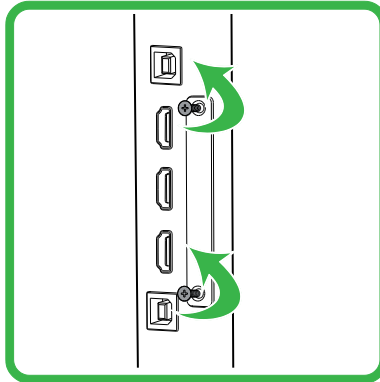


# Getting Started

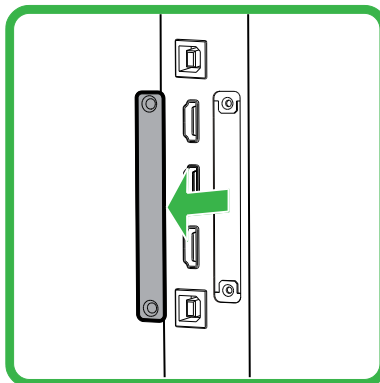
## Installing the Wi-Fi Module

In order for the display to have access to a wireless network or Internet, you must first install the Wi-Fi module included with the product. To install the Wi-Fi module:

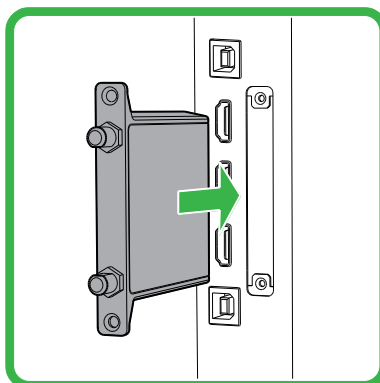
1. Remove the two screws on the Wi-Fi module slot cover.



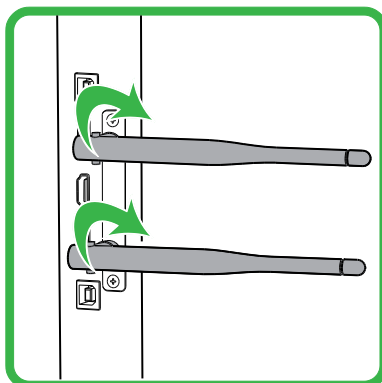
2. Remove the Wi-Fi module slot cover.



3. Insert the Wi-Fi module into the slot.



4. Install the two screws to secure the Wi-Fi module to the display, and then install the antennas onto the Wi-Fi module.

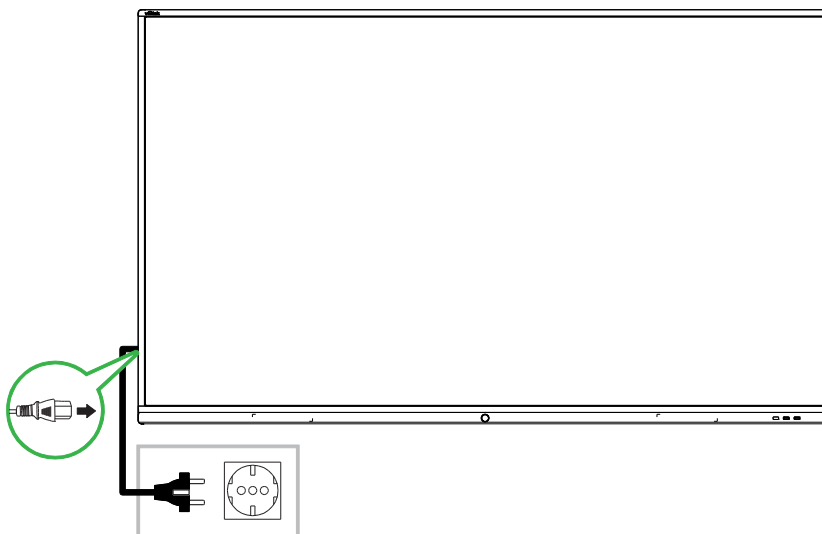


## Powering the Display

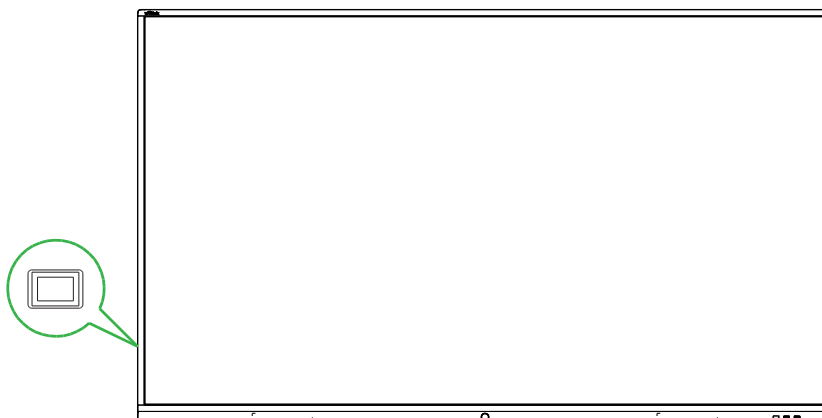
After mounting/installing the NovoTouch in the desired location you must supply power to the display using the following steps:

1. Plug the supplied power cable into the display and a power source.

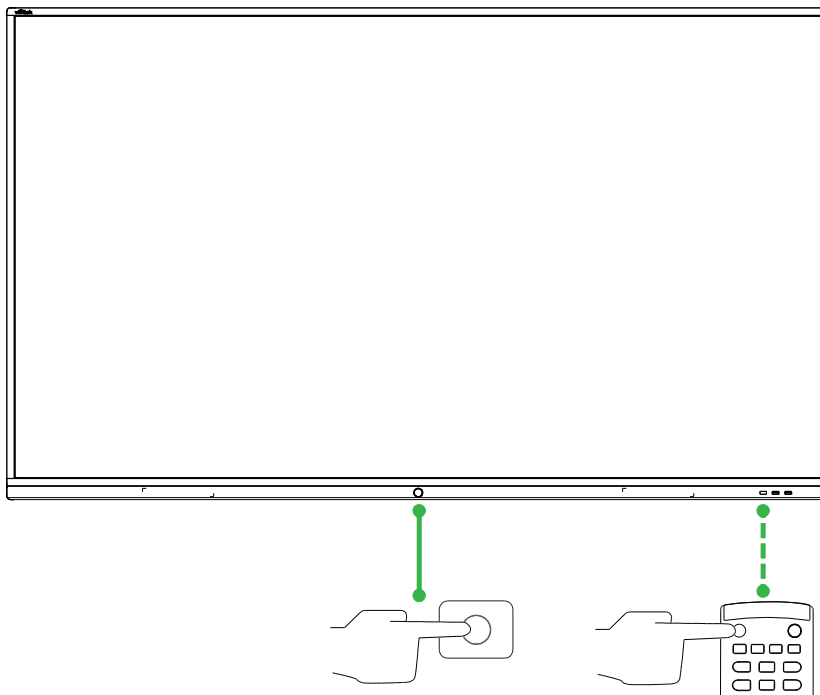
**NOTE:** Only use the power cable provided in the packaging with the display.



2. Turn the power switch located at the right side of the display on.



3. Press the power button on the display or the remote control to power on the display.



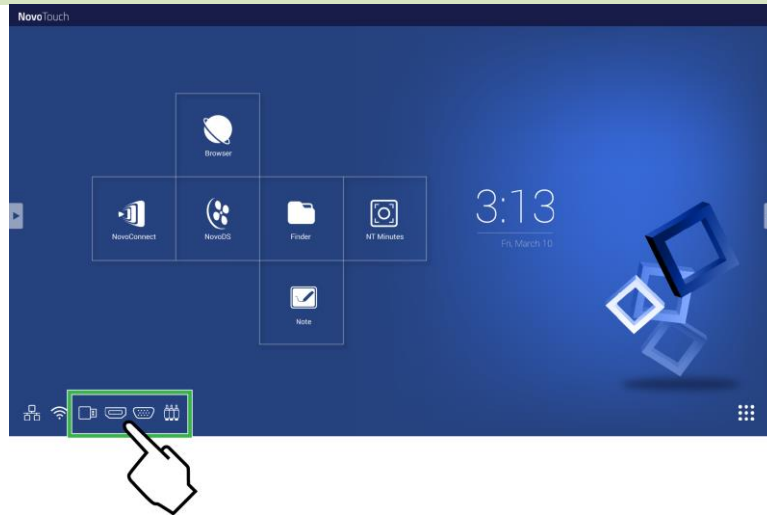
## Switching Input Source

After making a video input connection, open the input source menu to select which input source to show on the display. To open the input source menu, choose one of the following methods:

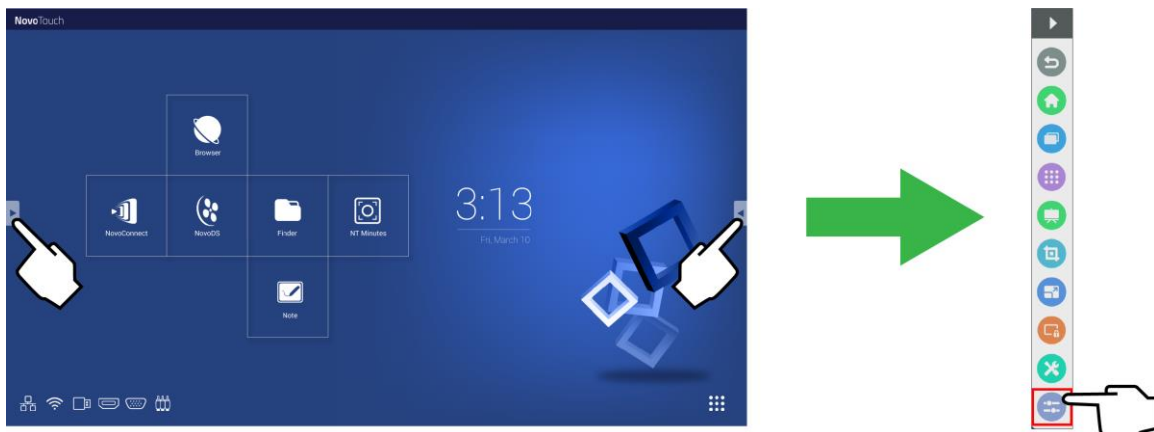
- Press the **Input** button on the remote control.



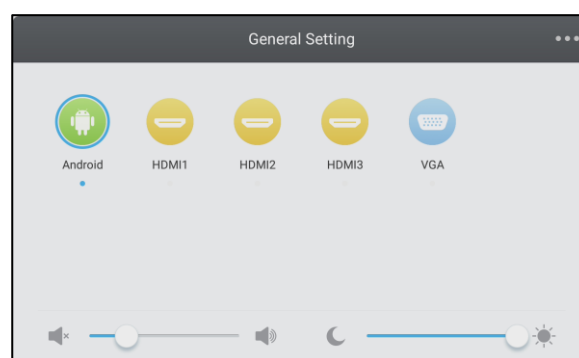
- Tap the input source icons at the bottom of the home screen.



- Tap the tool bar on the either side of the home screen, and then tap the input source button in the tool bar.



Once the input source menu is open select the video input you want to show on the display. Video inputs with a blue dot underneath indicate video inputs that are currently connected.



**NOTE:** If no video input source is available you can select Android to enter the NovoTouch user interface described in the [Using the Display](#) section.

## Setting up an Internet Connection

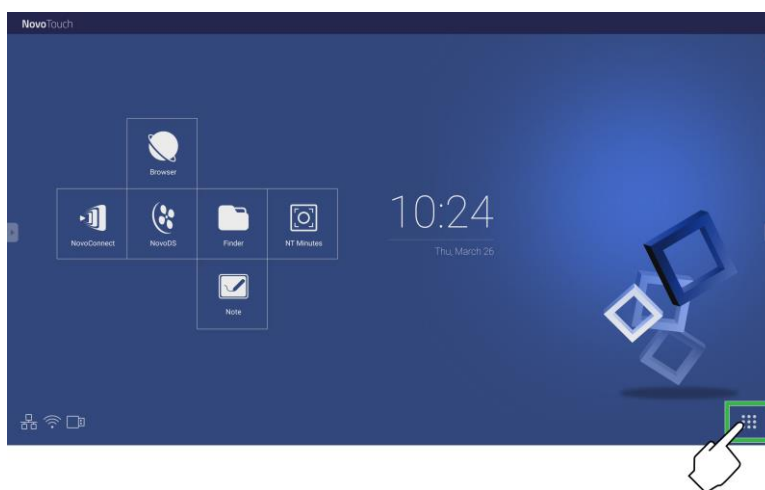
NovoTouch is able to connect to the internet using one of the following methods:

- A wired connection via the RJ-45 port, see the LAN (RJ-45) section for more information.
- A Wi-Fi connection.

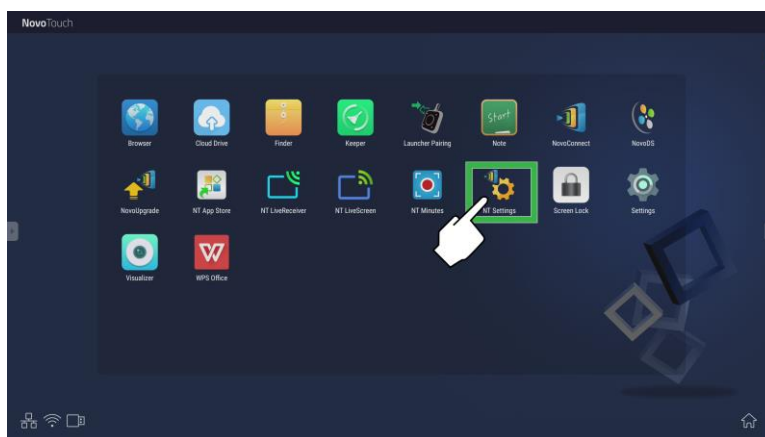
### Setting up a Wi-Fi Connection

To set up a Wi-Fi connection:

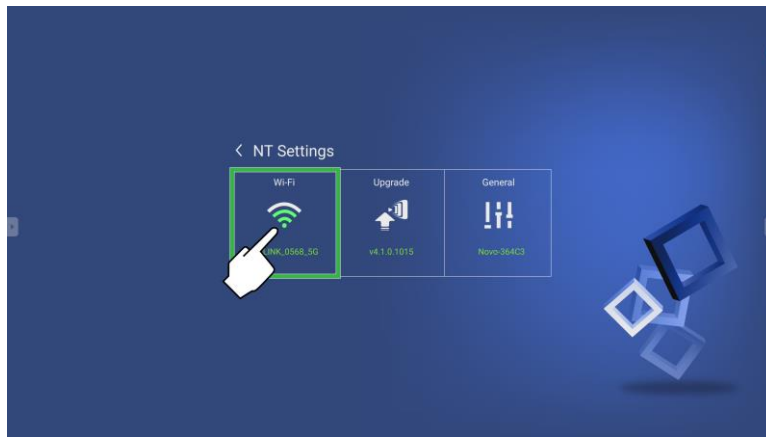
1. Ensure that the Wi-Fi module is installed in the Wi-Fi module slot. See the *Installing the Wi-Fi Module* section on page 27 for more information.
2. Open the All Apps (⋮) menu from the home screen.



3. Select **NT Settings** in the All Apps menu.

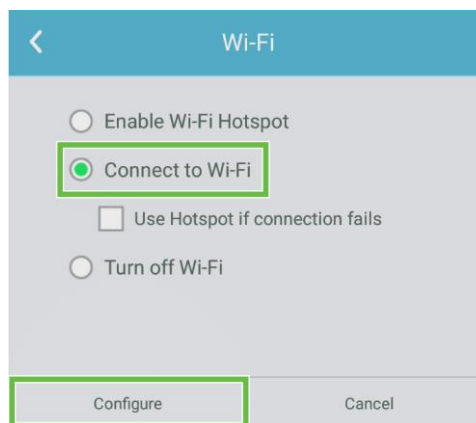


4. Select **Wi-Fi** in the **NT Settings** menu.

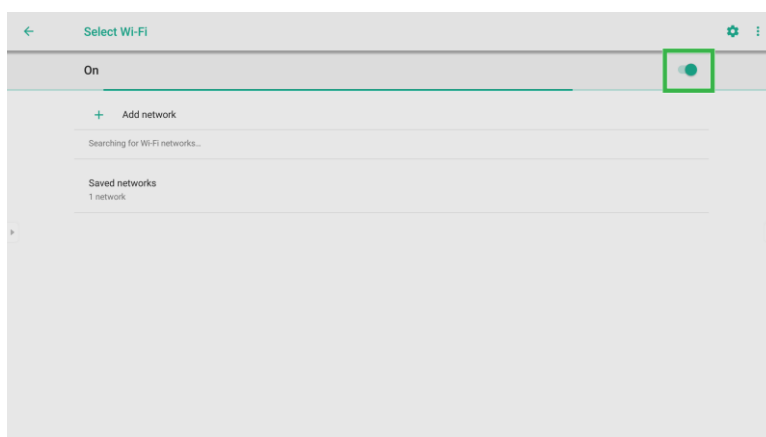


5. Select **Connect to Wi-Fi** in the **Wi-Fi** menu and then select **Configure**.

**NOTE:** If you want NovoTouch to automatically switch to Wi-Fi hotspot mode whenever a Wi-Fi connection is unavailable, check the Use Hotspot if connection fails box.

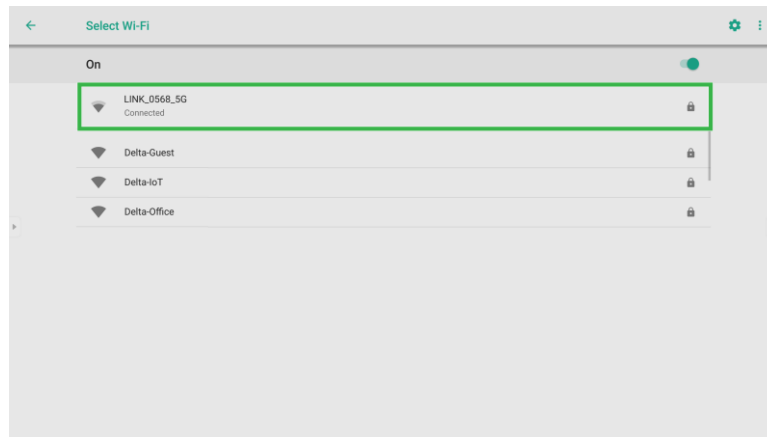


6. Turn the Wi-Fi switch on in the **Wi-Fi** menu.

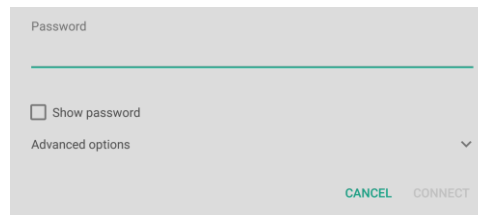




7. Select the Wi-Fi access point/router that you want NovoTouch to connect to.



8. Enter a security password if necessary.



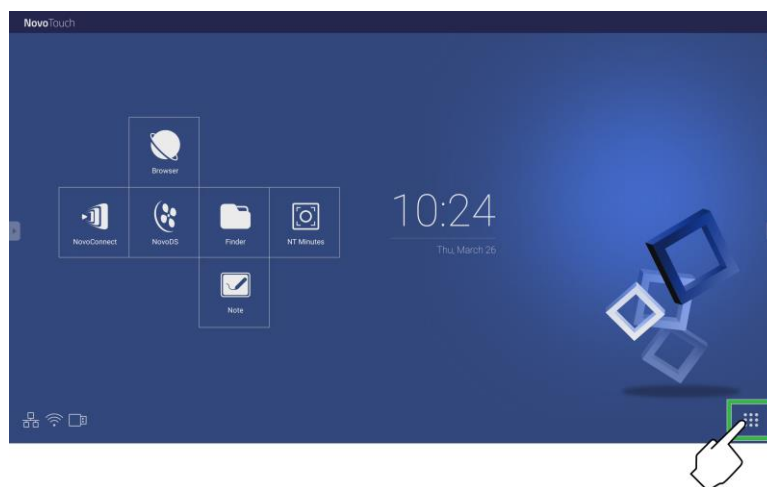
## Setting up a Wi-Fi Hotspot

When NovoTouch does not have access to a Wi-Fi access point, you can configure NovoTouch to act as a Wi-Fi hotspot to create a closed network for devices to connect to directly via their Wi-Fi menu.

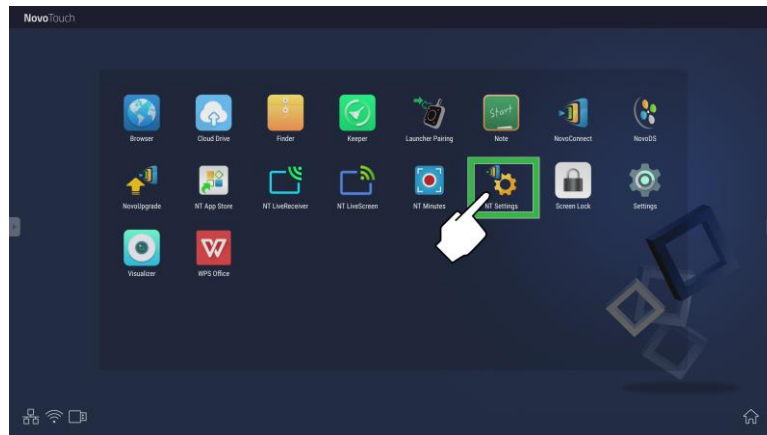
**NOTE:** When configured as a Wi-Fi hotspot, NovoTouch will only have access to the Internet if it is connected via its LAN port to a router with Internet access.

To configure NovoTouch to act as a Wi-Fi hotspot:

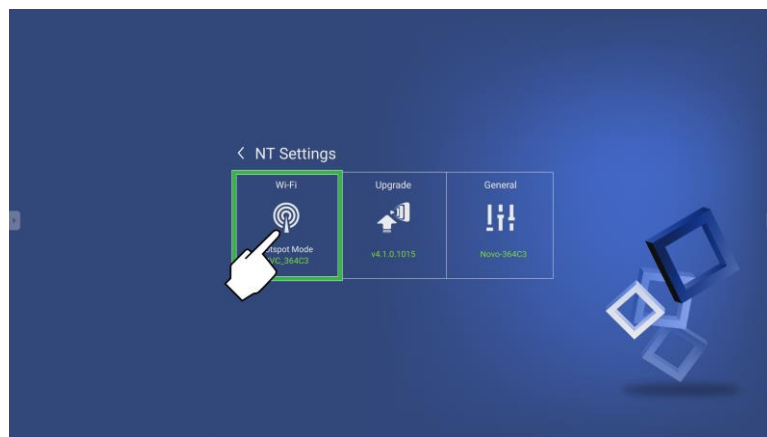
1. Ensure that the Wi-Fi module is installed in the Wi-Fi module slot. See the [Installing the Wi-Fi Module](#) section on page 27 for more information.
2. Open the All Apps (⋮) menu from the home screen.



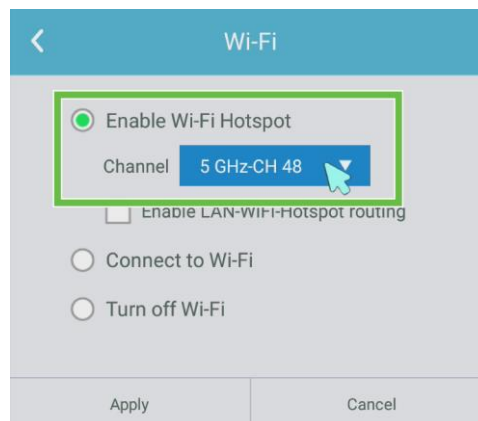
3. Select **NT Settings** in the All Apps menu.



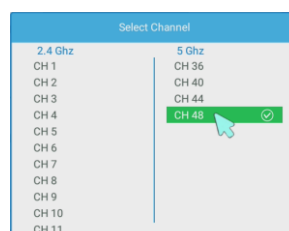
4. Select **Wi-Fi** in the **NT Settings** menu.



5. Select **Enable to Wi-Fi Hotspot** in the **Wi-Fi** menu and then select the Channel drop down menu.

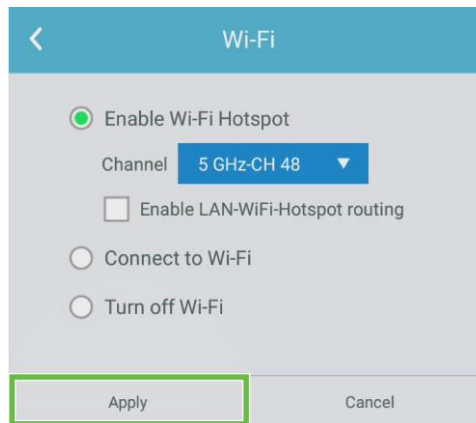


6. Select the bandwidth and channel you want the Wi-Fi hotspot signal to use in the **Select Channel** menu.



7. Select **Apply** in the **Wi-Fi** menu.

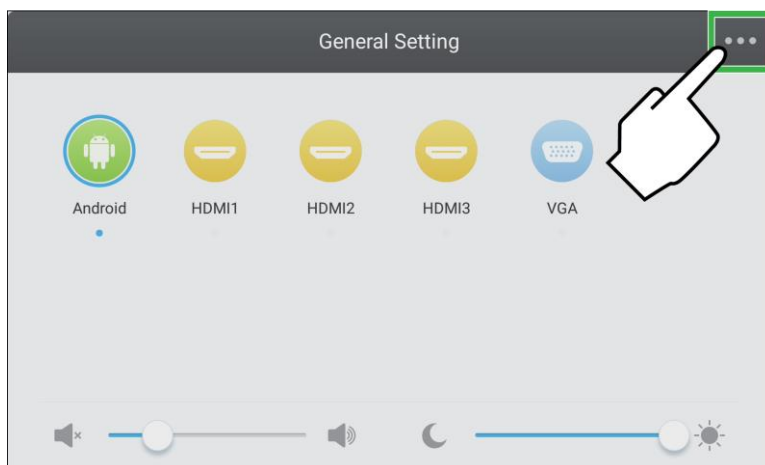
**NOTE:** Check the *Enable LAN-WiFi-Hotspot routing* box if NovoTouch is connected to a router with Internet access.

A screenshot of the 'Wi-Fi' settings menu. The menu has a blue header with a back arrow and the title 'Wi-Fi'. Below the header, there are four options: 'Enable Wi-Fi Hotspot' (selected with a green radio button), 'Channel' (set to '5 GHz-CH 48' with a dropdown arrow), 'Enable LAN-WiFi-Hotspot routing' (unchecked checkbox), 'Connect to Wi-Fi' (radio button), and 'Turn off Wi-Fi' (radio button). At the bottom, there are two buttons: 'Apply' (highlighted with a green border) and 'Cancel'.

## Display Settings

The display settings menu is an On-Screen Display (OSD) menu which allows you to configure various video/audio related settings for the display. To open the display settings menu choose one of the following methods:

- Open the input source menu, and then select **...** at the top left corner of the input source menu.



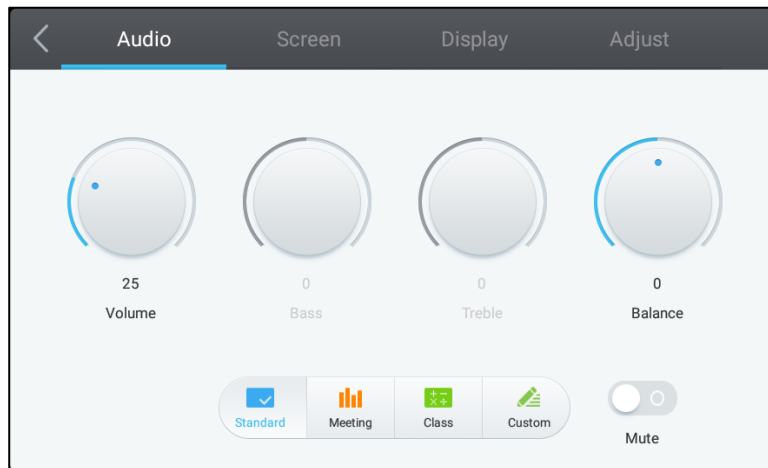
- Press the **Menu** button on the remote control.



The display settings menu includes the following for sub-menus:

- Audio
- Screen
- Display
- Adjust

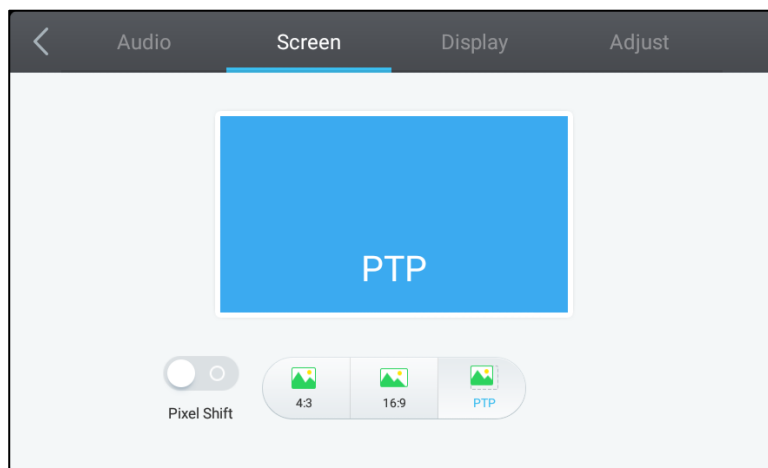
## Audio



The **Audio** settings menu allows you to adjust the following settings:

Item	Description
Volume	Adjusts the volume level for the display.
Bass	Adjusts the low-frequency audio level for the display.
Treble	Adjusts the high-frequency audio level for the display.
Balance	Adjusts the left/right audio balance for the display.
Preset Settings	Provides various preset audio settings for the display. The available settings include: Standard, Meeting, Class, and Custom.
Mute	Disables the display's audio.

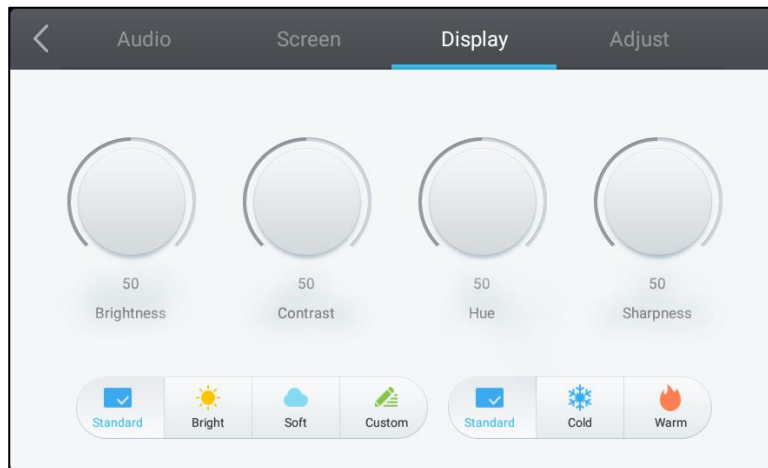
## Screen



The **Screen** settings menu allows you to adjust the following settings:

Item	Description
Pixel Shift	Enables/Disables pixel shift, which is a tool to prevent image burn-in by periodically moving the video frame so there are no static image.
4:3	Sets a 4:3 screen ratio for video.
16:9	Sets a 16:9 screen ratio for the video.
PTP (Pixel-To-Pixel)	Shows the video without scaling it, such that each pixel of the video correlates with a single pixel on the monitor.

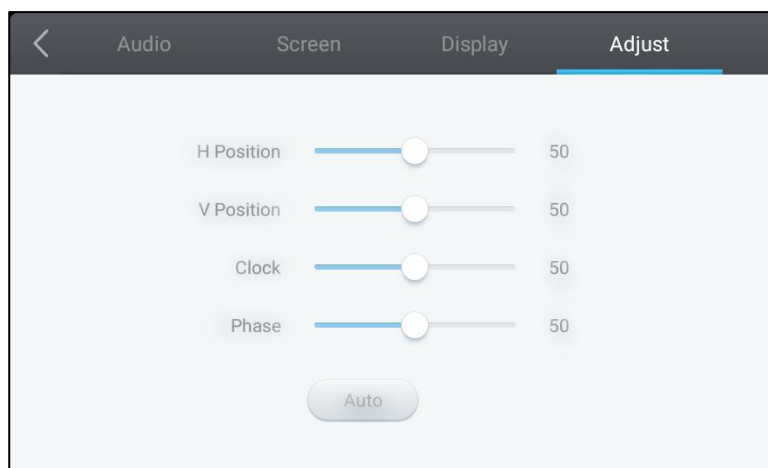
## Display



The **Display** settings menu allows you to adjust the following settings:

Item	Description
Brightness	Adjusts the brightness level for the display.
Contrast	Adjusts the contrast level for the display.
Hue	Adjusts the hue level for the display.
Sharpness	Adjusts the sharpness for the display.
Preset Settings	Provides various preset video settings for the display. The available settings include: <b>Standard</b> , <b>Bright</b> , <b>Soft</b> , <b>Custom</b> , <b>Cold</b> , and <b>Warm</b> . <b>NOTE: Bright/Soft/Custom and Cold/Warm settings can be set independent of each other.</b>

## Adjust



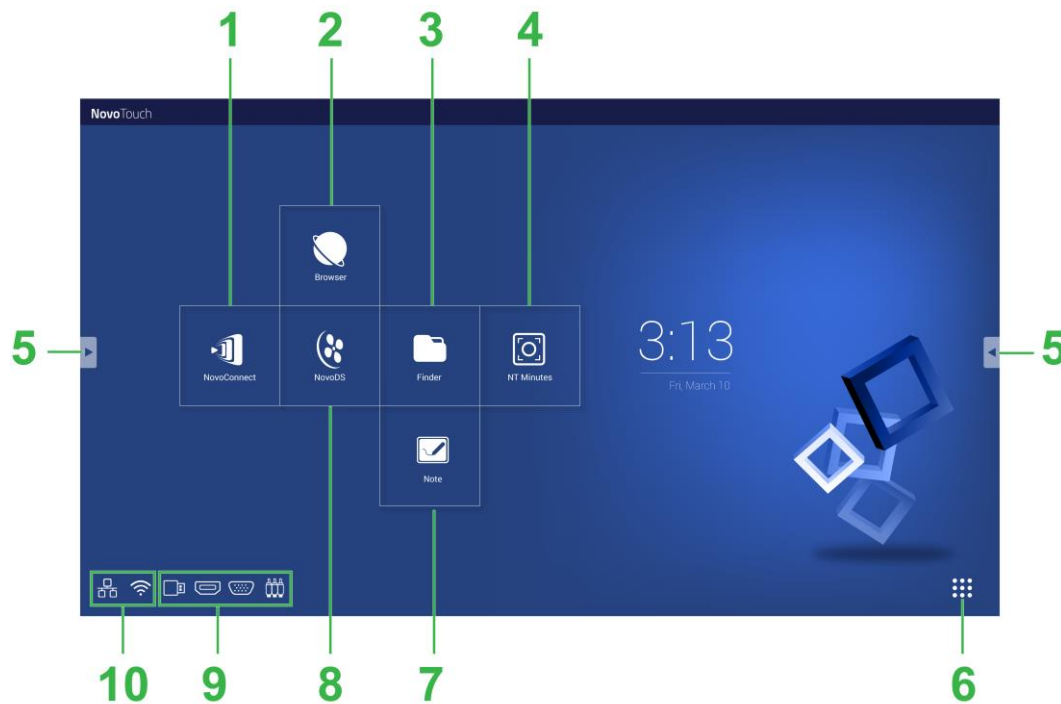
The **Adjust** settings menu allows you to adjust the following settings:

Item	Description
H Position	Adjusts the horizontal position of the video.
V Position	Adjusts the vertical position of the video.
Clock	Adjusts the pixel clock setting for the display.
Phase	Adjusts the phase setting for the display.
Auto	Allows the display to set the above settings automatically.

# Using the Display

## Home Screen

When NovoTouch is powered on and no video source is selected or if the **NovoTouch** button is selected in the input source menu, the NovoTouch home screen will be shown by default. The home screen is the main user interface for NovoTouch from where you are able to launch the following key apps installed on NovoTouch, as well as a set of touch-based tools:



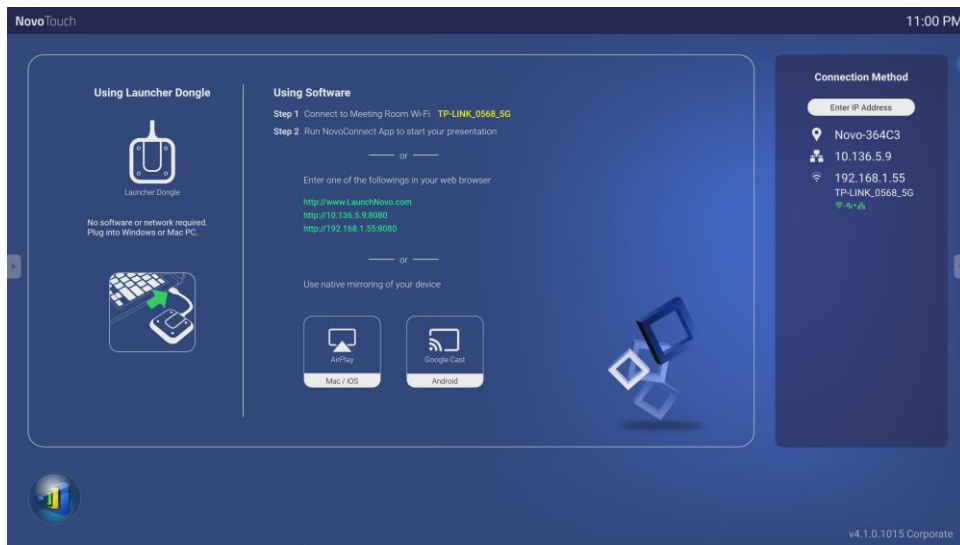
No.	Item	Description
1	NovoConnect App	Opens the NovoConnect app which allows users to project the screens of their device (PC, tablet or smartphone) on NovoTouch wirelessly for presentations and collaborative projects.
2	Web Browser	Opens the web browser app.
3	Finder	Opens the file management app.
4	NT Minutes App	Opens the NT Minutes app which allows you to record all the actions that occur on the NovoTouch screen as a video file.
5	Tools Menu	Opens a menu of quick interactive tools for the touchscreen. <b>NOTE:</b> The tools menu is also accessible when any app is opened on NovoTouch.
6	All Apps	Opens a menu of all the apps installed on NovoTouch.
7	Note Drawing App	Opens the sketchpad app.
8	NovoDS Digital Signage App	Opens the NovoDS app for creating digital signage content.
9	Input Sources	<ul style="list-style-type: none"> <li>Shows all the input sources that are connected.</li> <li>Tap to open the input source menu.</li> <li>If a USB storage device is connected, tap the icon to open the Finder file management app.</li> </ul>
10	Network Status	<ul style="list-style-type: none"> <li>Shows the status of your Wi-Fi and LAN connections.</li> <li>Tap to open the network settings menu</li> </ul>

The home screen for NovoTouch is non-configurable, but app shortcuts and widgets can be added to additional screens on the interface by touching and holding the touchscreen until the widgets and shortcuts selection screen appears.

See the following sections for more information on the various apps and tools located on the home page.

## NovoConnect

NovoConnect is the app that allows users to wirelessly connect their PCs, Macs, iPads/iPhones, or Android tablets/smartphones to NovoTouch and project their device's screen onto NovoTouch's touchscreen in a collaborative presentation session.



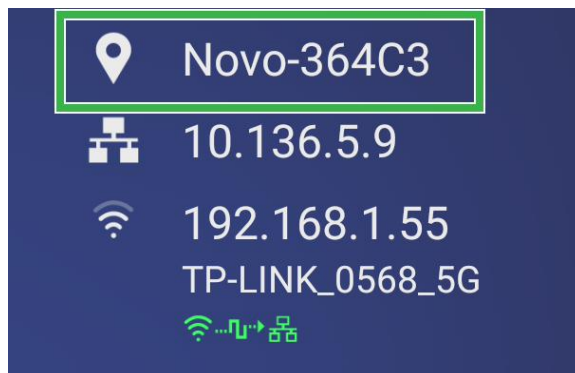
To wirelessly connect your device to NovoConnect and start a presentation session, follow the steps below:

1. Download and install the presentation software needed on your device based on the following table:

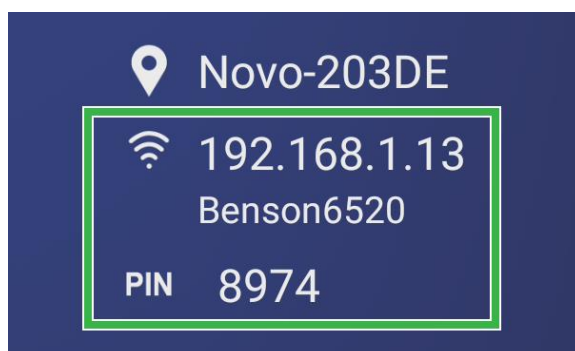
Type of Device	Software Needed	Download Location
PC / Mac	Desktop Streamer	www.vivitekcorp.com
iPad / iPhone	NovoPresenter	Google Play Store
Android Tablet / Smartphone	NovoPresenter	iOS App Store



2. If NovoTouch is connected to Wi-Fi: In your device's Wi-Fi menu connect to the same Wi-Fi network that NovoTouch is connected to.  
If NovoTouch is not connected to Wi-Fi: In your device's Wi-Fi menu connect to the SSID displayed in the top right corner of the NovoConnect home page.



3. Launch Desktop Streamer or NovoPresenter on your device.
4. Enter the IP address and PIN (optional) displayed in the top right corner of the NovoConnect home page into the login menu of Desktop Streamer or NovoPresenter.



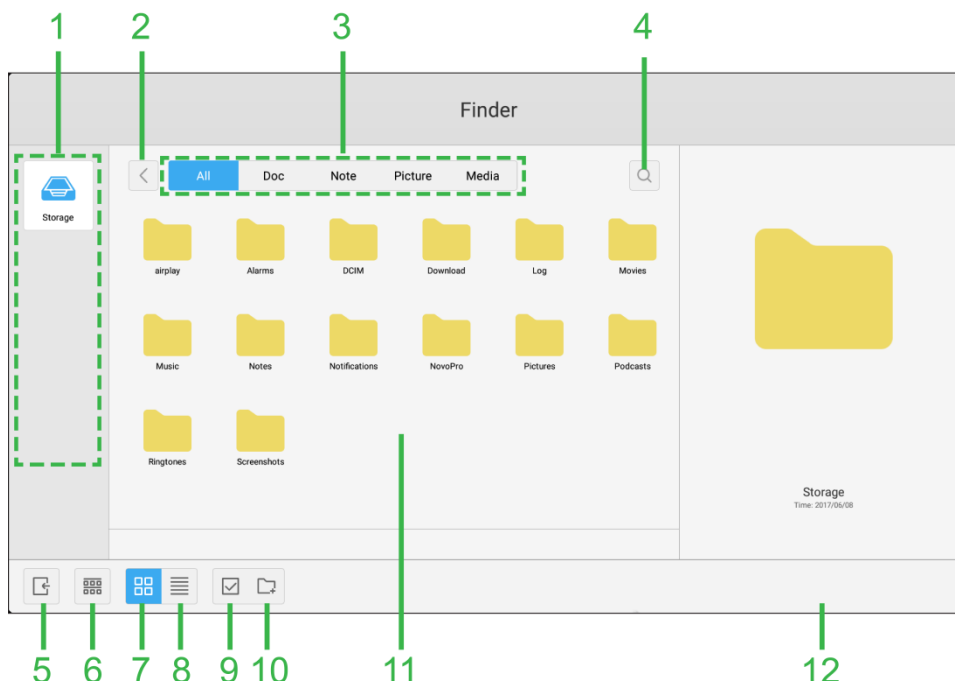
## Browser

The Browser app allows you to browse the internet on the NovoTouch after connecting the display to an internet connection via either an Ethernet connection or a wireless connection. See the LAN (RJ-45) section or the Setting up a Wi-Fi Connection section for more information on connecting the display to the internet.



## Finder

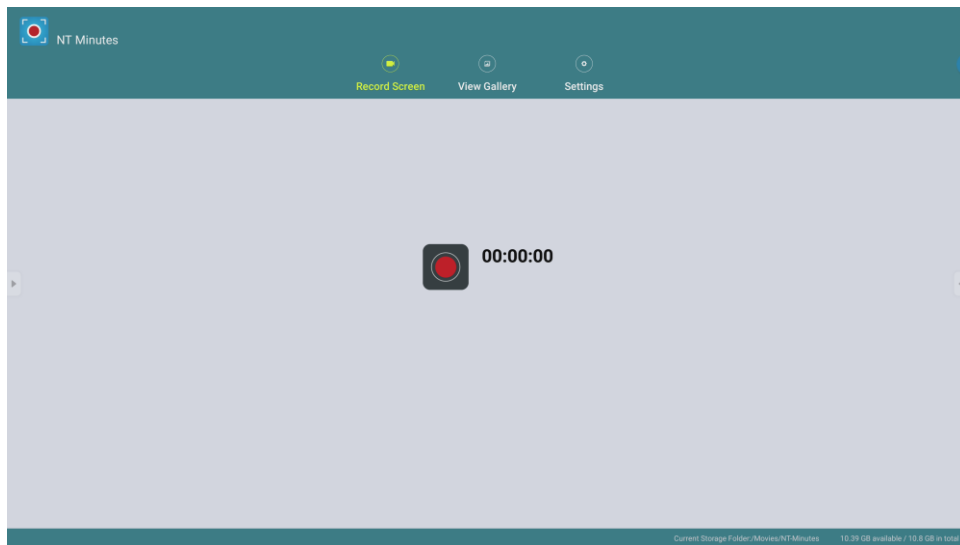
The Finder app allows you to navigate the files and folders saved locally on NovoTouch as well as any storage devices connected to ports.



No.	Item	Description
1	Storage Devices List	Displays the various storage devices available to navigate in the app, select a storage device to navigate.
2	Previous	Jumps to the previous folder opened in the navigation window.
3	File Type	Allows you to view files based on file type.
4	Search	Allows you to search for specific files.
5	Exit	Exits the Finder app.
6	Sort	Sorts the files either by name, type, size, or time.
7	Thumbnail	Changes the navigation window to thumbnail view.
8	List	Changes the navigation window to list view.
9	Select	Allows you to select multiple files in the navigation window. Once files are selected a file management menu will open allowing you to copy, paste, cut, delete, etc. the files selected.
10	Select All	Selects all files in the navigation window. Once files are selected a file management menu will open allowing you to copy, paste, cut, delete, etc. the files selected.
11	Navigation Window	Navigate through file folders in this window.
12	File Details	Displays details for the file selected in the navigation window.

## NT Minutes

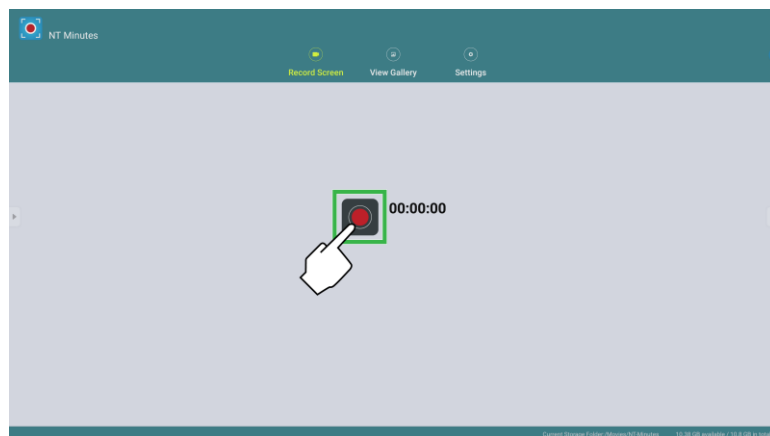
The NT Minutes app allows you to record any actions taken on the NovoTouch screen.



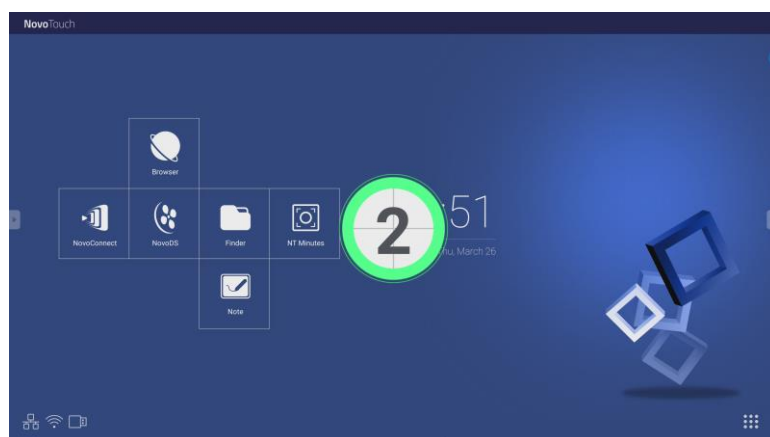
### Recording your screen

To record your screen as an MP4 video file using the NT Minutes app:

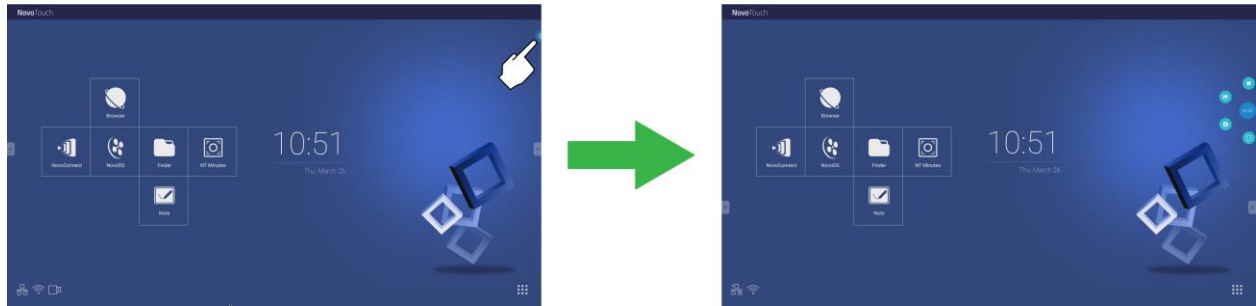
1. Tap the record button on the NT Minutes main page.



2. The NovoTouch will return to its home screen and a countdown will be shown after which NT Minutes will start recording the screen.

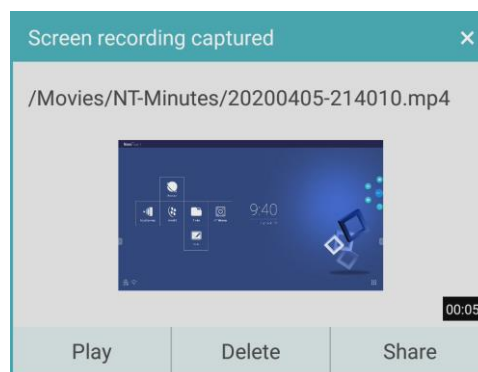


- Anytime during the recording process you can tap the menu button at the top right corner for the following recording options:



Item	Description
	Stop recording.
	Start recording.
	Enter a gallery of all available screen recordings.
	Open the NT Minutes settings menu.
	Exit the NT Minutes app and return to the NovoTouch home screen.

Once you stop the recording process you will have the option to either playback the recorded video, delete the video, or share the video.

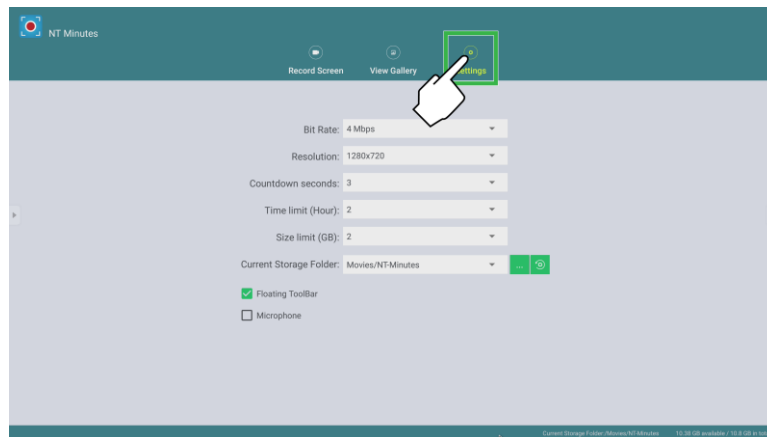


You can also view any of the previous screen recordings by tapping the View Gallery tab in the NT Minutes main screen.



## Settings

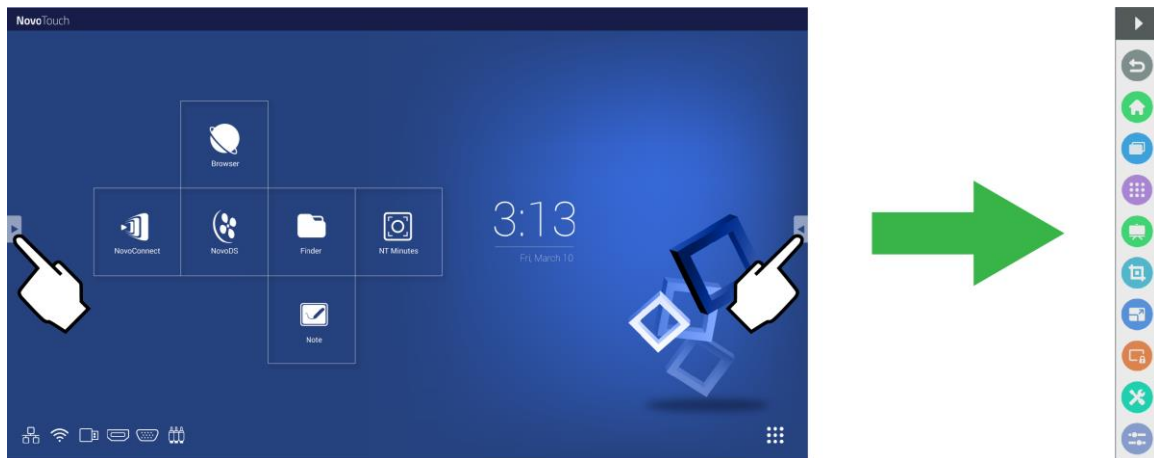
Tap the **Settings** tab in the NT Minutes main screen to configure the following settings: **Bit Rate**, **Resolution**, **Countdown seconds**, **Time limit**, **Size limit**, and **Storage Folder**.



You are also able to enable/disable the **Floating Toolbar** and **Microphone** during recording process.

## Tools

The NovoTouch user interface features a set of interactive tools that are accessible from any screen/app in the interface by touching the arrow button on the left and right side of the touchscreen, as seen in the image below.



The tools include the following items:

Item	Description
	Returns to the previous screen.
	Returns the display to the home screen.
	Allows you to switch between the recently opened apps.
	Opens the All Apps menu.
	Launches the Note app. See the <a href="#">Note</a> section on page 47for more information on the Note app.
	Allows you to create a screenshot of the screen which can be annotated using the touchscreen and then saved.
	Launches the freeze screen tool which allows you to freeze the image shown on the display and then zoom in or out on the frozen image.
	Allows you to activate/deactivate a 4-digit screen lock password.
	Opens menu of additional interactive tools including the following: <ul style="list-style-type: none"> <li>Spotlight: Illuminates only a portion of the image shown on the display.</li> <li>Countdown: Turns the touchscreen to an interactive countdown clock.</li> <li>StopWatch: Turns the touchscreen into an interactive stopwatch.</li> <li>AirClass: Turns the touchscreen into an interactive voting tool.</li> </ul>
	Opens the input source menu.

## Note

The Note app allows you to use the touchscreen as a sketchpad to freehand draw on the display using touch gestures.

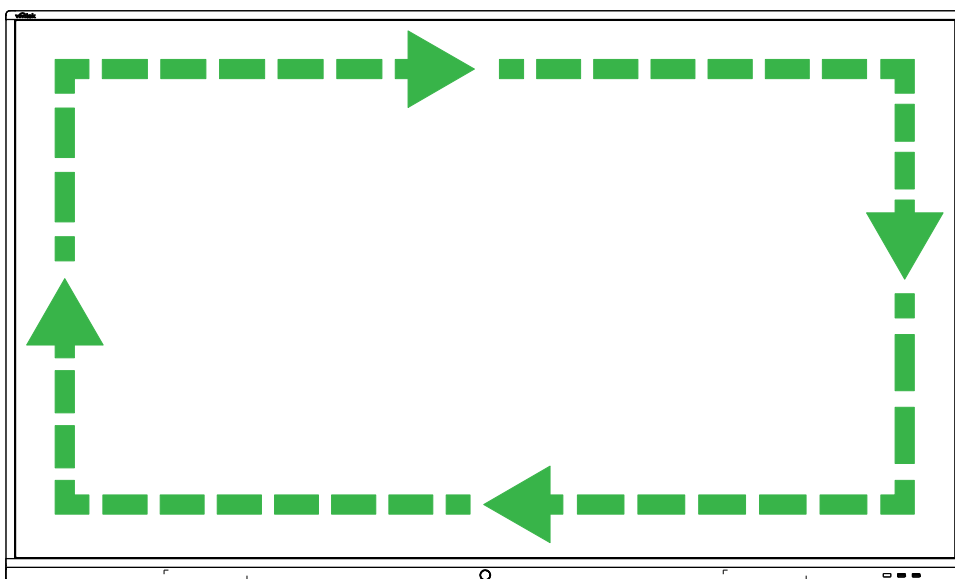


No.	Item	Description
1	File Menu	Allows you to save/open/start new drawings, import/export images, and perform other file related actions.
2	Close	Closes the Note app.
3	Cursor	Allows you to select and move items drawn on the touchscreen.
4	Drawing Tool	Allows you to draw as well as configure the size and color of the drawing tool you want to use.
5	Eraser Tool	Allows you to erase items drawn on the touchscreen.
6	Clear All Tool	Allows you to erase all items drawn on the touchscreen at once.
7	Shapes Tool	Allows you to add lines and shapes on the drawing.
8	Zoom Tool	Allows you to change the scale level of the drawing.
9	Undo	Cancels the previous action.
10	Redo	Restores the previous action.
11	Add Page	Adds a new page to the drawing.
12	Previous Page	Jumps to the previous page.
13	Next Page	Jumps to the next page.

# Cleaning the Display

When cleaning the NovoTouch display, please ensure you follow the instructions below to prevent damage to the display and its panel.

- Before you begin cleaning the display, ensure that it is powered off and unplugged from the power source. Then remove any styluses, pens, or accessories attached to the display.
- Do not use any chemicals on the panels.
- Do not use anything abrasive to wipe the display, use a clean soft, lint-free cloth instead to wipe the display.
- Do not spray water directly on the display, fill a spray bottle with water and spray directly on to the cleaning cloth instead. After wiping the display with the wet cleaning cloth use another clean soft, lint-free cloth to dry the display.
- Make sure all dust, debris, and smudges are removed from the display, ensuring that the corners and edges are also wiped clean.
- When wiping the display use a circular motion as seen in the image below:





# Specifications

Model Name			NovoTouch EK653i	NovoTouch EK753i	NovoTouch EK863i
Display Type/Size/Technology			65" Backlit D-LED (ADS Panel)	75" Backlit D-LED (ADS Panel)	86" Backlit D-LED (ADS Panel)
Native Resolution			4K Ultra-HD (3840 x 2160)		
Viewing Angle (H/V)			178°/178°		
Aspect Ratio			16:9		
Response Time (MS)			8ms (Typ)		
Refresh Rate			60Hz		
Estimated Life Time (Typical)			30,000 Hours		
Display Color (Bit)			1.07 Billion (10-bit)		
Touch Technology			Infrared Touch		
Display Orientation			Landscape (No portrait mode support)		
Daily Operation (Hours/Days)			16/7		
Touch Technology			Infrared Touch		
Touch Points (Writing/Touch)			10 Points/20 Points		
Accuracy (Finger/Passive Pen)			±2mm / ±2mm		
Response Time			<10ms		
Touch Resolution			32,768 x 32,768		
Surface Protection			4mm Thick Toughened Glass		
Touch Tools			Finger, Stylus, Glove, Opaque Objects		
Operating System Version			Android™ v8.0		
CPU			Multi-Core High-Performance ARM®CPU		
GPU			4*Mali™ G51		
RAM			3GB DDR3		
Internal Storage (eMMC Flash)			16GB (eMMC Flash) (Approximately 9GB User Availability)		
Connectivity	Input	Display	HDMI v2.0 (x3) (HDCP v2.2 Compliant), VGA-In (x1)		
		Audio	Audio-In (3.5mm) (x1)		
	Output	Display	HDMI-Out v2.0 (x1) (HDCP v2.2 Compliant)		
		Audio	Audio-Out (3.5mm) (x1), SPDIF-Out (x1)		
	Internet		LAN (RJ-45) (x1)		
	Control		RS232 (x1)		
	Wireless	Wi-Fi	IEEE 802.11 a/b/g/n/ac (2.4GHz/5GHz) (Wifi USB Module)		
		IR Receiver	Front (x1) (±30° angle, >8m distance)		
	USB	Front	USB 2.0 (x2)		
		Side	USB 3.0 (x3), USB Type B (x2) (For Touch Port)		
		Bottom	USB 2.0 (x1)		
Expansion (OPS Slot)	Android Module		Slot 1: 120pin NovoConnect OPS (Optional)		
	Windows Module		Slot 2: Standard Intel 80pin OPS (Optional)		
Internal Speakers			16W (x2) (Stereo)		
Power	Supply		AC 100-240V, 50/60Hz		
	Consumption		300W	400W	450W
	Standby Mode		<0.5W (Standby)		
Dimensions (L x H x D) (Estimated)			1,488.7 x 897 x 92mm (58.6" x 35.3 x 3.6")	1,709.7 x 1,020.3 x 91.4mm (67.3" x 40.2" x 3.6")	1,957.4 x 1,160.1 x 91.4mm (77.1" x 45.7" x 3.6")
Weight (Estimated)			41.4kg (91.3lbs)	55.3kg (122lbs)	70.8kg (156.1lbs)
Available Color			Grey		

# Troubleshooting

## If the display does not function normally

Remote control failure	1	Check whether there are other objects between the remote control and the IR sensor window, thus leading to remote control failure.
	2	Check whether the battery electrodes in the remote control are in the correct orientation.
	3	Check whether remote control needs to replace its batteries.
Machine automatically shuts down	1	Check whether sleep is set or not.
	2	Check whether there has been a sudden power outage.
	3	Check whether there is a signal (the display may power off after a period of inactivity).

## PC mode issues

Signal is out of range	1	Check whether the display is setup correctly.
	2	Check whether the resolution is the best resolution.
Background has vertical lines or streaks	1	Select auto correction in the OSD settings menu.
	2	Adjust the clock and phase values in the OSD settings menu.
Image lacks color or the color is incorrect	1	Check whether the video cables are well connected or have quality problems.
	2	Adjust brightness or contrast values in the OSD settings menu.
The display format is not supported	1	Select auto correction in the OSD settings menu.
	2	Adjust the clock and phase values in the OSD settings menu.

## Touch functionality issues

Touch function invalid	1	Check whether the touchscreen driver is installed.
	2	Check whether the size of point of contact is comparable to finger.
Touch position is not correct	1	Check whether the touchscreen driver is installed.
	2	Check whether touch pen is facing the screen.

## Videos do not function normally

No picture and no sound	1	Check whether the machine is in a powered state.
	2	Check whether signal cable is plugged in correctly, and whether the correct input source is selected.
	3	If the display is in internal computer mode, check whether internal computer is started.
The image features horizontal or vertical stripes or image dithering	1	Check whether signal cable is plugged in correctly.
	2	Check whether other electronic equipment or power tools are placed around the machine.
No color, color is weak, or image is weak	1	Adjust brightness or contrast values in the OSD settings menu.
	2	Check whether signal cable is plugged in correctly.

## Audio does not function normally

Images is shown without sound	1	Check whether the mute button has been pressed.
	2	Press VOL + / - to adjust volume.
	3	Check whether the audio line is connected correctly.
Only one speaker has sound	1	Adjust the sound balance in the OSD settings menu.
	2	Check whether the computer's sound control panel has only set up one sound channel.
	3	Check whether audio line is connected correctly.
VGA output is shown without sound	1	Check whether the audio out jack of the external device is connected to the audio in jack.

# Appendix (RS-232 Specifications)

## Serial Port Settings:

Item	Value
Baud Rate	9600bps
Data Bits	8
Stop Bits	1
Parity	None

## Protocol (With ID):

1. Length (1 byte): Total byte of message excluding "CR"
2. ID (2 byte): Identification for each of the monitor  
If the communication is between LAN chip and Sacler chip, the ID should be always "01" (0x30 0x31)
3. Command Type (1 byte)  
0x53 ('s'): Set command  
0x47 ('g'): Get command  
0x72 ('r'): Reply command  
0x2B ('+'): Valid command reply  
0x2D ('-'): Invalid command reply
4. Command Code (1 byte)
5. Value (at least 3 byte)
6. CR (1 byte): 0x0D

## Set Command

Send Command: Length (1 byte) + ID (2 byte) + Cmd Type (1 byte) + Cmd Code (1 byte) + Value ( $\geq 3$  byte) + CR (1 byte).

Ex: Set Brightness as 76 for ID-02 and this command is valid.

Send Packet:

Byte	0	1	2	3	4	5	6	7	8
Name	Length	ID		Cmd Type	Cmd Code	Value			CR
Hex	0x3A	0x30	0x35	0x53	0x24	0x30	0x37	0x36	0x0D

Return Packet:

Byte	0	1	2	3	4
Name	Length	ID		Cmd Type	CR
Hex	0x34	0x30	0x35	0x2B	0x0D

Ex: Set Brightness as 76 for all monitors.

Send Packet:

Byte	0	1	2	3	4	5	6	7	8
Name	Length	ID		Cmd Type	Cmd Code	Value			CR
Hex	0x3A	0x39	0x39	0x53	0x24	0x30	0x37	0x36	0x0D

Return Packet: No return packet.

## Get Command

Send Command: Length (1 byte) + ID (2 byte) + Cmd Type (1 byte) + Cmd Code (1 byte) + Value ( $\geq 3$  byte) + CR (1 byte).

Ex: Get Brightness from ID-05 and this command is valid, and the Brightness value is 67.

Send Packet:

Byte	0	1	2	3	4	5	6	7	8
Name	Length	ID		Cmd Type	Cmd Code	Value			CR
Hex	0x3A	0x30	0x35	0x47	0x62	0x30	0x30	0x30	0x0D

Return Packet:

Byte	0	1	2	3	4	5	6	7	8
Name	Length	ID		Cmd Type	Cmd Code	Value			CR
Hex	0x3A	0x30	0x35	0x72	0x62	0x30	0x36	0x37	0x0D

性质	类型	Cmd (Hex)	名称	带 ID 命令 ( HEX , 默认 ID=1 , 有回复 )	备注 1	备注 2
SET	Power	30	000 : backlight off	3A 30 31 53 30 30 30 0d		
			001 : backlight on	3A 30 31 53 30 30 30 31 0d		
			002 : power off	3A 30 31 53 30 30 30 32 0d		
			003 : power on	3A 30 31 53 30 30 30 33 0d	仅支持通过串口线开机	
SET	Treble	31	000 ~ 100	3A 30 31 53 31 30 35 30 0d	范围 000-100	测试值 50
SET	Bass	32	000 ~ 100	3A 30 31 53 32 31 30 30 0d	范围 000-100	测试值 100
SET	Balance	33	000 ~ 100	3A 30 31 53 33 30 35 30 0d	范围 000-100	测试值 50
SET	Contrast	34	000 ~ 100	3A 30 31 53 34 30 35 30 0d	范围 000-100	测试值 50
SET	Brightness	35	000 ~ 100	3A 30 31 53 35 30 35 30 0d	范围 000-100	测试值 50
SET	Sharpness	36	000 ~ 100	3A 30 31 53 36 30 31 30 0d	范围 000-100	测试值 10
SET	Sound Mode	37	000 : Movie	3A 30 31 53 37 30 30 30 0d		
			001 : Standard	3A 30 31 53 37 30 30 31 0d		
			002 : Custom	3A 30 31 53 37 30 30 32 0d		
			003 : Classroom	3A 30 31 53 37 30 30 33 0d		
			004 : Meeting	3A 30 31 53 37 30 30 34 0d		
SET	Volume	38	000 ~ 100	3A 30 31 53 38 30 35 30 0d	范围 000-100	测试值 50
SET	Mute	39	000: Off	3A 30 31 53 39 30 30 30 0d		
			001: On	3A 30 31 53 39 30 30 31 0d		
SET	Video Source	3A	000 : VGA	3A 30 31 53 3A 30 30 30 0d		
			001 : HDMI1	3A 30 31 53 3A 30 30 31 0d		
			002 : HDMI2	3A 30 31 53 3A 30 30 32 0d		
			003 : AV	3A 30 31 53 3A 30 30 33 0d		
			022 : HDMI4	3A 30 31 53 3A 30 32 32 0d		
			021 : HDMI3	3A 30 31 53 3A 30 32 31 0d		
			031 : VGA2	3A 30 31 53 3A 30 33 31 0d		
			032 : VGA3	3A 30 31 53 3A 30 33 32 0d		
			051 : TV	3A 30 31 53 3A 30 35 31 0d		
			101 : android	3A 30 31 53 3A 31 30 31 0d		
			103 : Slot in PC	3A 30 31 53 3A 31 30 33 0d		
			007 : Display Port	3A 30 31 53 3A 30 30 37 0d		
			102 : android +	3A 30 31 53 3A 31 30 32 0d		
			104 : Type-C1	3A 30 31 53 3A 31 30 34 0d		
			105 : Type-C1	3A 30 31 53 3A 31 30 35 0d		
SET	Aspect Ratio	3B	000 : 16:9	3A 30 31 53 3B 30 30 30 0d		
			001 : 4:3	3A 30 31 53 3B 30 30 31 0d		
			002 : PTP	3A 30 31 53 3B 30 30 32 0d		
SET	Language	3C	000: English	3A 30 31 53 3C 30 30 30 0d	设置 Android 通道语言	
			001: Français	3A 30 31 53 3C 30 30 31 0d		
			002: Español	3A 30 31 53 3C 30 30 32 0d		
			003: 繁中	3A 30 31 53 3C 30 30 33 0d	设置为繁体	
			004: 简中	3A 30 31 53 3C 30 30 34 0d	设置为简体	
			005: Português	3A 30 31 53 3C 30 30 35 0d		
			006: German	3A 30 31 53 3C 30 30 36 0d		
			007: Dutch	3A 30 31 53 3C 30 30 37 0d		
			008: Polish	3A 30 31 53 3C 30 30 38 0d		
			009: Russia	3A 30 31 53 3C 30 30 39 0d		
			010:Czech	3A 30 31 53 3C 30 31 30 0d		
			011:Danish	3A 30 31 53 3C 30 31 31 0d		
			012:Swedish	3A 30 31 53 3C 30 31 32 0d		
			013:Italian	3A 30 31 53 3C 30 31 33 0d		

			014:Romanian	3A 30 31 53 3C 30 31 34 0d		
			015:Norwegian	3A 30 31 53 3C 30 31 35 0d		
			016:Finnish	3A 30 31 53 3C 30 31 36 0d		
			017:Greek	3A 30 31 53 3C 30 31 37 0d		
			018:Turkish	3A 30 31 53 3C 30 31 38 0d		

性质	类型	Cmd (Hex)	名称	带 ID 命令 ( HEX , 默认 ID=1 , 有回复 )	备注 1	备注 2
			019:Arabic	3A 30 31 53 3C 30 31 39 0d		
			020:Japanese	3A 30 31 53 3C 30 32 30 0d		
			021:Ukraine	3A 30 31 53 3C 30 32 31 0d		
SET	Picture Mode	3D	000 : standard	3A 30 31 53 3D 30 30 30 0d		
			001 : bright	3A 30 31 53 3D 30 30 31 0d		
			002 : soft	3A 30 31 53 3D 30 30 32 0d		
			003 : customer	3A 30 31 53 3D 30 30 33 0d		
SET	Hue (Color)	3E	000 ~ 100	3A 30 31 53 3E 30 33 30 0d	范围 000-100	测试值 30
SET	Backlight	3F	000 ~ 100	3A 30 31 53 3F 30 35 30 0d	范围 000-100	测试值 50
SET	Color Temp	40	000 : Cool	3A 30 31 53 40 30 30 30 0d		
			001 : Standard	3A 30 31 53 40 30 30 31 0d		
			002 : Warm	3A 30 31 53 40 30 30 32 0d		
SET	Reomte control command	41	000 : Vol +	3A 30 31 53 41 30 30 30 0d		
			001 : Vol -	3A 30 31 53 41 30 30 31 0d		
			010 : Remote 上	3A 30 31 53 41 30 31 30 0d		
			011 : Remote 下	3A 30 31 53 41 30 31 31 0d		
			012 : Remote 左	3A 30 31 53 41 30 31 32 0d		
			013 : Remote 右	3A 30 31 53 41 30 31 33 0d		
			014 : Remote OK	3A 30 31 53 41 30 31 34 0d		
			020 : Remote Menu Key	3A 30 31 53 41 30 32 30 0d		
			021 : Remote Input source	3A 30 31 53 41 30 32 31 0d		
			022 : Remote Exit	3A 30 31 53 41 30 32 32 0d		
			031 : Blank	3A 30 31 53 41 30 33 31 0d	亮黑屏	
			032 : Freeze	3A 30 31 53 41 30 33 32 0d		
SET	IR	42	000: Enable	3A 30 31 53 42 30 30 30 0d	解锁遥控器	
			001: Disable	3A 30 31 53 42 30 30 31 0d	锁住遥控器	
SET	Spearker	43	000 : off	3A 30 31 53 43 30 30 30 0d		
			001 : on	3A 30 31 53 43 30 30 31 0d		

性质	类型	Cmd (Hex)	名称	带 ID 命令 ( HEX , 默认 ID=1 , 有回复 )	回复	备注 2
GET	Power	30	000 : backlight off	3A 30 31 47 30 30 30 0D	3A 30 31 72 30 30 30 0D	仅支持通过 串口线获取该 状态
			001 : backlight on		3A 30 31 72 30 30 30 0D	
			002 : power off		3A 30 31 72 30 30 30 0D	
GET	Treble	31	000~100	3A 30 31 47 31 30 30 30 0D	3A 30 31 72 31 30 35 30 0D	举例回复的是 050
GET	Bass	32	000~100	3A 30 31 47 32 30 30 30 0D	3A 30 31 72 32 30 35 30 0D	举例回复的是 050
GET	Balance	33	000~100	3A 30 31 47 33 30 30 30 0D	3A 30 31 72 33 30 35 30 0D	举例回复的是 050
GET	Contrast	34	000~100	3A 30 31 47 34 30 30 30 0D	3A 30 31 72 34 30 35 30 0D	举例回复的是 050
GET	Brightness	35	000~100	3A 30 31 47 35 30 30 30 0D	3A 30 31 72 35 30 35 30 0D	举例回复的是 050
GET	Sharpness	36	000~100	3A 30 31 47 36 30 30 30 0D	3A 30 31 72 36 30 31 30 0D	举例回复的是 010
GET	Sound Mode	37	000 : Movie	3A 30 31 47 37 30 30 30 0D	3A 30 31 72 37 30 30 30 0D	
			001 : Standard		3A 30 31 72 37 30 30 31 0D	
			002 : Custom		3A 30 31 72 37 30 30 32 0D	
			003 : Classroom		3A 30 31 72 37 30 30 33 0D	
			004 : Meeting		3A 30 31 72 37 30 30 34 0D	
GET	Volume	38	000~100	3A 30 31 47 38 30 30 30 0D	3A 30 31 72 38 30 35 30 0D	举例回复的是 050
GET	Mute	39	000: Off	3A 30 31 47 39 30 30 30 0D	3A 30 31 72 39 30 30 30 0D	
			001: On		3A 30 31 72 39 30 30 31 0D	
GET	Video Source	3A	000 : VGA	3A 30 31 47 3A 30 30 30 0D	3A 30 31 72 3A 30 30 30 0D	
			001 : HDMI1		3A 30 31 72 3A 30 30 31 0D	
			002: HDMI2		3A 30 31 72 3A 30 30 32 0D	
			003 : CVBS / AV		3A 30 31 72 3A 30 30 33 0D	
			022 : HDMI4		3A 30 31 72 3A 30 32 32 0D	
			021 : HDMI3		3A 30 31 72 3A 30 32 31 0D	
			031 : VGA2		3A 30 31 72 3A 30 33 31 0D	
			032 : VGA3		3A 30 31 72 3A 30 33 32 0D	
			051 : TV		3A 30 31 72 3A 30 35 31 0D	
			101 : android		3A 30 31 72 3A 31 30 31 0D	
			103 : Slot in PC		3A 30 31 72 3A 31 30 33 0D	
			007 : Display Port		3A 30 31 72 3A 30 30 37 0D	
			102 : android +		3A 30 31 72 3A 31 30 32 0D	
			104 : Type-C1		3A 30 31 72 3A 31 30 34 0D	
			105 : Type-C2		3A 30 31 72 3A 31 30 35 0D	
GET	Aspect Ratio	3B	000 : 16:9	3A 30 31 47 3B 30 30 30 0D	3A 30 31 72 3B 30 30 30 0D	
			001 : 4:3		3A 30 31 72 3B 30 30 31 0D	
			002 : PTP		3A 30 31 72 3B 30 30 32 0D	
GET	Language	3C	000: English	3A 30 31 47 3C 30 30 30 0D	3A 30 31 72 3C 30 30 30 0D	获取 Android 通道语言
			001: Français		3A 30 31 72 3C 30 30 31 0D	
			002: Español		3A 30 31 72 3C 30 30 32 0D	
			003: 繁中		3A 30 31 72 3C 30 30 33 0D	
			004: 简中		3A 30 31 72 3C 30 30 34 0D	
			005: Português		3A 30 31 72 3C 30 30 35 0D	

			006: German		3A 30 31 72 3C 30 30 36 0D	
			007: Dutch		3A 30 31 72 3C 30 30 37 0D	
			008: Polish		3A 30 31 72 3C 30 30 38 0D	
			009: Russia		3A 30 31 72 3C 30 30 39 0D	
			010:Czech		3A 30 31 72 3C 30 31 30 0D	
			011:Danish		3A 30 31 72 3C 30 31 31 0D	

性质	类型	Cmd (Hex)	名称	带 ID 命令 ( HEX , 默认 ID=1 , 有回 复 )	回复	备注 2
			012:Swedish		3A 30 31 72 3C 30 31 32 0D	
			013:Italian		3A 30 31 72 3C 30 31 33 0D	
			014:Romanian		3A 30 31 72 3C 30 31 34 0D	
			015:Norwegian		3A 30 31 72 3C 30 31 35 0D	
			016:Finnish		3A 30 31 72 3C 30 31 36 0D	
			017:Greek		3A 30 31 72 3C 30 31 37 0D	
			018:Turkish		3A 30 31 72 3C 30 31 38 0D	
			019:Arabic		3A 30 31 72 3C 30 31 39 0D	
			020:Japanse		3A 30 31 72 3C 30 32 30 0D	
			021:Ukraine		3A 30 31 72 3C 30 32 31 0D	
GET	Picture Mode	3D	000 : standard	3A 30 31 47 3D 30 30 30 0D	3A 30 31 72 3D 30 30 30 0D	
			001 : bright		3A 30 31 72 3D 30 30 31 0D	
			002 : soft		3A 30 31 72 3D 30 30 32 0D	
			003 : customer		3A 30 31 72 3D 30 30 33 0D	
GET	Hue (Color)	3E	000~100	3A 30 31 47 3E 30 30 30 0D	3A 30 31 72 3E 30 33 30 0D	举例回复的是 030
GET	Backlight	3F	000~100	3A 30 31 47 3F 30 30 30 0D	3A 30 31 72 3F 30 35 30 0D	举例回复的是 050
GET	Color Temp	40	000 : Cool	3A 30 31 47 40 30 30 30 0D	3A 30 31 72 40 30 30 30 0D	
			001 : Standard		3A 30 31 72 40 30 30 31 0D	
			002 : Warm		3A 30 31 72 40 30 30 32 0D	
GET	Reomte comtrol(IR)	42	000: Enable	3A 30 31 47 42 30 30 30 0D	3A 30 31 72 42 30 30 30 0D	
			001: Disable		3A 30 31 72 42 30 30 31 0D	
GET	Spearker	43	000 : off ( 禁用扬声器 )	3A 30 31 47 43 30 30 30 0D	3A 30 31 72 30 30 30 30 0D	
			001 : on ( 启用扬声器 )		3A 30 31 72 30 30 30 31 0D	



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## About the Manual

The manual describes how to install and use the display and is applicable to the end-user. Relevant information (such as illustrations and descriptions) is put on the same page as possible as we can. The format, easy for printing, is convenient for reading and paper-saving which is beneficial to environmental protection. It is suggested printing the page you need.

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